CMT-CPX22/ MHC-NXM3

SERVICE MANUAL

Ver 1.0 2004. 04

US Model
CMT-CPX22
AEP Model
CMT-CPX22/MHC-NXM3
UK Model
E Model
CMT-CPX22

- CMT-CPX22 and MHC-NXM3 are composed of following models.
  As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME

	CMT-CPX22	MHC-NXM3
COMPACT DISC DECK RECEIVER SYSTEM	HCD-CPX22	HCD-NXM3
SPEAKER SYSTEM	SS-CPX22	SS-NXM3

SPECIFICATIONS

General

Power requirements
U.S.A. model: 120 V AC, 60 Hz
European and Russian models:
230 V AC, 50/60 Hz
Saudi Arabian model: 120 – 127 V or 220 – 240 V AC, 50/60 Hz
Adjustable with voltage selector
Other models: 120 V, 220 – 240 V AC, 50/60 Hz
Adjustable with voltage selector
Power consumption
U.S.A. model: 65 watts
European models: 65 watts
0.3 watts (in Power Saving mode)
Other models: 65 watts
Dimensions (w/h/d) incl. projecting parts and controls
Amplifier/Tuner/Tape/CD section:
Approx. 230 x 292 x 355 mm
Mass
Amplifier/Tuner/Tape/CD section:
Approx. 6.1 kg
Supplied accessories Remote Commander (1)
Size AA (R6) batteries (2)
AM loop antenna (1)
FM lead antenna (1)
Speaker pads (8)
Speaker cords (2)

Design and specifications are subject to change without notice.

- Abbreviation
  E3 : 240 V AC Area in E model
  E51 : Chilean and Peruvian model
  EA : Saudi Arabia model

PARTS LIST

Ref. No.	Part No.	Description	Remarks
		ACCESSORIES	
		**********	
	1-478-518-21	COMMANDER, STANDARD (RM-SC3)	
	1-501-374-12	ANTENNA, LOOP (AM)	
	1-793-184-23	CONNECTOR (F TYPE ADAPTOR) (FM)	
	1-824-005-21	CORD (WITH CONNECTOR) (for SPEAKER)	
	2-022-183-11	MANUAL, INSTRUCTION (ENGLISH, RUSSIAN)	(MHC-NXM3)
	4-210-254-02	CUSHION (FOOT) (for SPEAKER)	
	4-253-813-11	MANUAL, INSTRUCTION (ENGLISH)	
	4-253-813-21	MANUAL, INSTRUCTION (FRENCH) (E3, EA)	
	4-253-813-31	MANUAL, INSTRUCTION	(FRENCH, SPANISH) (AEP, E51)
	4-253-813-41	MANUAL, INSTRUCTION	(GERMAN, ITALIAN, DUTCH) (AEP)
	4-253-813-51	MANUAL, INSTRUCTION	(PORTUGUESE, SWEDISH) (AEP)
	4-253-813-61	MANUAL, INSTRUCTION (ARABIC) (E3, EA)	
	4-254-992-11	MANUAL, INSTRUCTION	(DANISH, FINNISH) (AEP)
	4-254-992-21	MANUAL, INSTRUCTION (PORTUGUESE) (AEP)	
	4-254-992-31	MANUAL, INSTRUCTION (GERMAN) (AEP)	
	4-254-992-41	MANUAL, INSTRUCTION	(CZECH, HUNGARIAN) (AEP)
	4-254-992-51	MANUAL, INSTRUCTION (TARKISH) (AEP)	
	4-254-992-61	MANUAL, INSTRUCTION (SLOVAKIAN) (AEP)	

HCD-CPX22
MICRO Hi-Fi COMPONENT SYSTEM
MHC-NXM3
MiNi Hi-Fi COMPONENT SYSTEM

9-877-827-01
2004D02-1
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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004.04	New

HCD-CPX22/NXM3

SERVICE MANUAL

Ver. 1.2 2007.11

Photo : HCD-CPX22

US Model
HCD-CPX22
AEP Model
HCD-CPX22/NXM3
UK Model
E Model
HCD-CPX22

- HCD-CPX22 is the Amplifier, CD player, tape deck and tuner section in CMT-CPX22.
- HCD-NXM3 is the Amplifier, CD player, tape deck and tuner section in MHC-NXM3.

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM81B-F1BD81A
	Base Unit Name	BU-F1BD81A
	Optical Pick-up Name	KSM-215DCP/C2NP
TAPE Section	Model Name Using Similar Mechanism	NEW

SPECIFICATIONS

Amplifier section
For the U.S.A. model
AUDIO POWER SPECIFICATIONS
HCD-CPX22
POWER OUTPUT AND TOTAL HARMONIC DISTORTION: With 4-ohm loads, both channels driven, from 120 – 10,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.

Other models:
The following measured at AC 120 – 127/220 – 240 V, 50/60 Hz (Saudi Arabian model only)
The following measured at AC 230 V, 50/60 Hz (European and Russian models only)
The following measured at AC 120/220 – 240 V, 50/60 Hz (except for European, Russian and Saudi Arabian models)

DIN power output (rated): 75 + 75 watts (4 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 100 + 100 watts (4 ohms at 1 kHz, 10% THD)

Inputs
VIDEO/MD IN (phono jacks): Sensitivity 250/450 mV, impedance 47 kilohms

Outputs
DIGITAL (OPTICAL) OUT: Optical Wavelength: 660 nm
PHONES (mini jack): accepts headphones with an impedance of 8 ohms or more

SPEAKER: Use only the supplied speakers
SS-CPX22
(HCD-CPX22)
SS-NXM3
(HCD-NXM3)

CD player section
System: Compact disc and digital audio system
Laser: Semiconductor laser (λ=770 – 810 nm)
Emission duration: continuous
Frequency response: 2 Hz – 20 kHz (±0.5 dB)

Tape deck section
Recording system: 4-track 2-channel stereo
Frequency response: 50 – 13,000 Hz (±3 dB), using Sony TYPE I cassettes

– Continued on next page –

HCD-CPX22
MICRO Hi-Fi COMPONENT SYSTEM
HCD-NXM3
MiNi Hi-Fi COMPONENT SYSTEM

9-877-828-03
2007K02-1
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Audio Business Group
Published by Sony Techno Create Corporation

SONY

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	
U.S.A. model:	87.5 – 108.0 MHz (100-kHz step)
Russian model:	65.0 – 74.0 MHz (10-kHz step) (There is no stereo effect)
	87.5 – 108.0 MHz (50-kHz step)
Other models:	87.5 – 108.0 MHz (50-kHz step)
Antenna	FM lead antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	
Pan-American model:	530 – 1,710 kHz (with the tuning interval set at 10 kHz)
	531 – 1,710 kHz (with the tuning interval set at 9 kHz)
European, Russian and Saudi Arabian models:	
	531 – 1,602 kHz (with the tuning interval set at 9 kHz)
Other models:	531 – 1,602 kHz (with the tuning interval set at 9 kHz)
	530 – 1,710 kHz (with the tuning interval set at 10 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements	
U.S.A. model:	120 V AC, 60 Hz
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Mass	
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Supplied accessories	Remote Commander (1)
	Size AA (R6) batteries (2)
	AM loop antenna (1)
	FM lead antenna (1)
	Speaker pads (8)
	Speaker cords

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

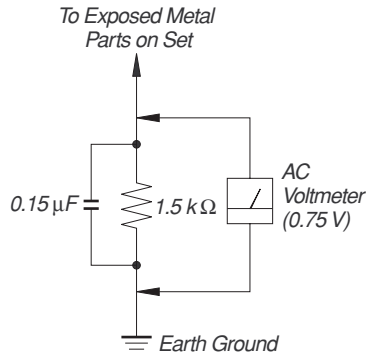


Fig. A. Using an AC voltmeter to check AC leakage.

TABLE OF CONTENTS

1. SERVICING NOTES 4

2. GENERAL
Location of Controls 5

3. DISASSEMBLY
3-1. Disassembly Flow 7
3-2. Case 8
3-3. Main Board, Front Panel Section 8
3-4. Tape Mechanism Deck 9
3-5. Panel Board 9
3-6. Back Panel 10
3-7. CD Mechanism Deck (CDM81B-F1BD81A) 10
3-8. S-Master Board 11
3-9. Tray 11
3-10. M761 (LD/ST Motor), M762 (BU U/D Motor) 12
3-11. Base Unit (BU-F1BD81A) 12
3-12. BD Board 13

4. TEST MODE 14

5. MECHANICAL ADJUSTMENTS 17

6. ELECTRICAL ADJUSTMENTS
Deck section 17
CD Section 18

7. DIAGRAMS
7-1. Circuit Board Location 21
7-2. Block Diagram – CD Servo Section – 22
7-3. Block Diagram – Tuner/Tape Deck Section – 23
7-4. Block Diagram – Main Section – 24
7-5. Block Diagram – S-Master Section – 25
7-6. Printed Wiring Board – BD Board – 26
7-7. Schematic Diagram – BD Board – 27
7-8. Printed Wiring Board – CD Mechanism Board – 28
7-9. Schematic Diagram – CD Mechanism Board – 29
7-10. Printed Wiring Boards – Main Board – 30
7-11. Schematic Diagram – Main Board (1/3) – 31
7-12. Schematic Diagram – Main Board (2/3) – 32
7-13. Schematic Diagram – Main Board (3/3) – 33
7-14. Printed Wiring Boards – Panel Board – 34
7-15. Schematic Diagram – Panel Board – 35
7-16. Printed Wiring Board – Disc SW, Vol, HP Board – 36
7-17. Schematic Diagram – Disc SW, Vol, HP Board – 37
7-18. Printed Wiring Board – S-Master Board – 38
7-19. Schematic Diagram – S-Master Board – 39
7-20. IC Block Diagram 40
7-21. IC Pin Function Description 41

8. EXPLODED VIEWS
8-1. Main Section 47
8-2. Front Panel Section 48
8-3. Chassis Section 49
8-4. CD Mechanism Deck Section-1 (CDM81B-F1BD81A) 50
8-5. CD Mechanism Deck Section-2 (CDM81B-F1BD81A) 51
8-6. CD Mechanism Deck Section-3 (CDM81B-F1BD81A) 52

9. ELECTRICAL PARTS LIST 53

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product. This label is located on the rear exterior.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

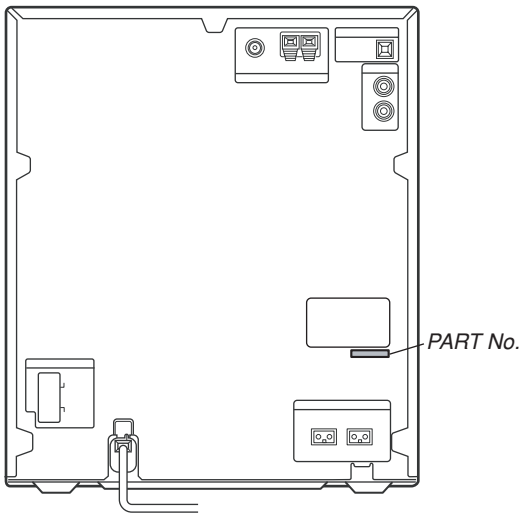
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output several times.

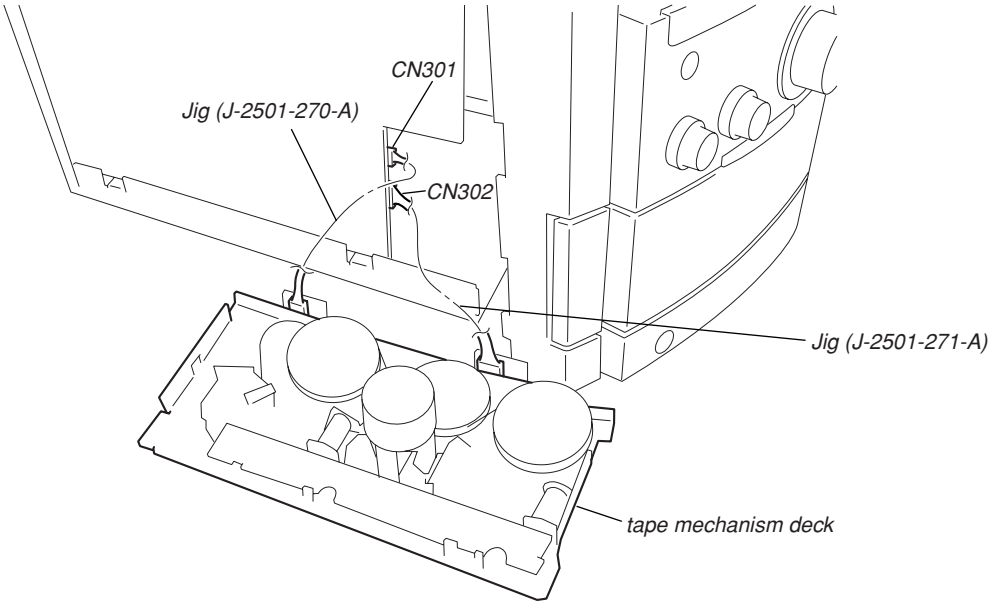
- Abbreviation
  E3 : 240 V AC Area in E model
  E51 : Chilean and Peruvian model
  EA : Saudi Arabia model
  RU : Russian model

• MODEL IDENTIFICATION
– Back Panel –



MODEL	PART No.
AEP, UK models	4-253-358-0[]
RU model	4-253-358-1[]
E3 model	4-253-358-2[]
E51 model	4-253-358-3[]
US model	4-253-358-4[]
EA model	4-253-358-5[]

• SERVICE POSITION FOR TAPE MECHANISM DECK



SECTION 2
GENERAL

This section is extracted from instruction manual.

LOCATING THE CONTROLS

List of button locations and reference pages

Main unit

ALPHABETICAL ORDER

A – O

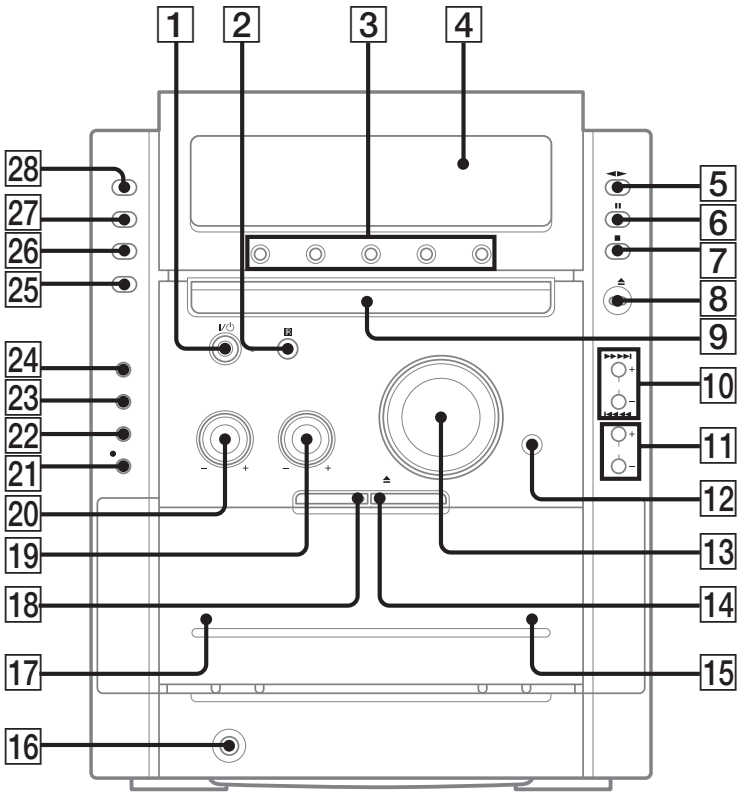
ALBUM +/– 11
BASS control 20
CD 28
CD SYNC 22
Deck A 17
Deck B 15
DIMMER 23
DISC 1 – 5 3
Disc tray 9
DISPLAY 24
Display window 4
DSGX 12

P – Z

PHONES jack 16
Remote sensor 2
TAPE A/B 26
TREBLE control 19
TUNER/BAND 27
TUNING +/– 10
VIDEO/MD 25
VOLUME control 13

BUTTON DESCRIPTIONS

I/⏻ (power) 1
◄► (play) 5
II (pause) 6
■ (stop) 7
CD ⏏ (eject) 8
I◄◄ ◄◄/►►►►I (rewind/fast forward, go back/go forward) 10
TAPE ⏏ B(eject) 14
A TAPE ⏏ (eject) 18
● START 21



This section is extracted from instruction manual.

Remote control

ALPHABETICAL ORDER

A – E

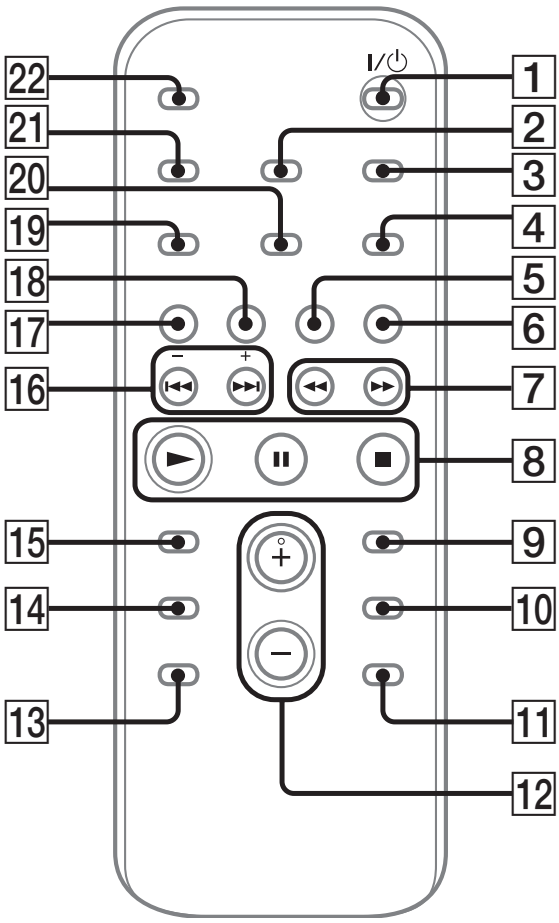
ALBUM – 13
ALBUM + 11
CD 18
CLEAR 15
CLOCK/TIMER SELECT 2
CLOCK/TIMER SET 3
DISC SKIP 10
DISPLAY 21
ENTER 9
EQ 14

F – Z

FM MODE 4
FUNCTION 6
PLAY MODE 20
REPEAT 4
SLEEP 22
TAPE 17
TUNER BAND 5
TUNER MEMORY 19
TUNING MODE 20
VOLUME +/– 12

BUTTON DESCRIPTIONS

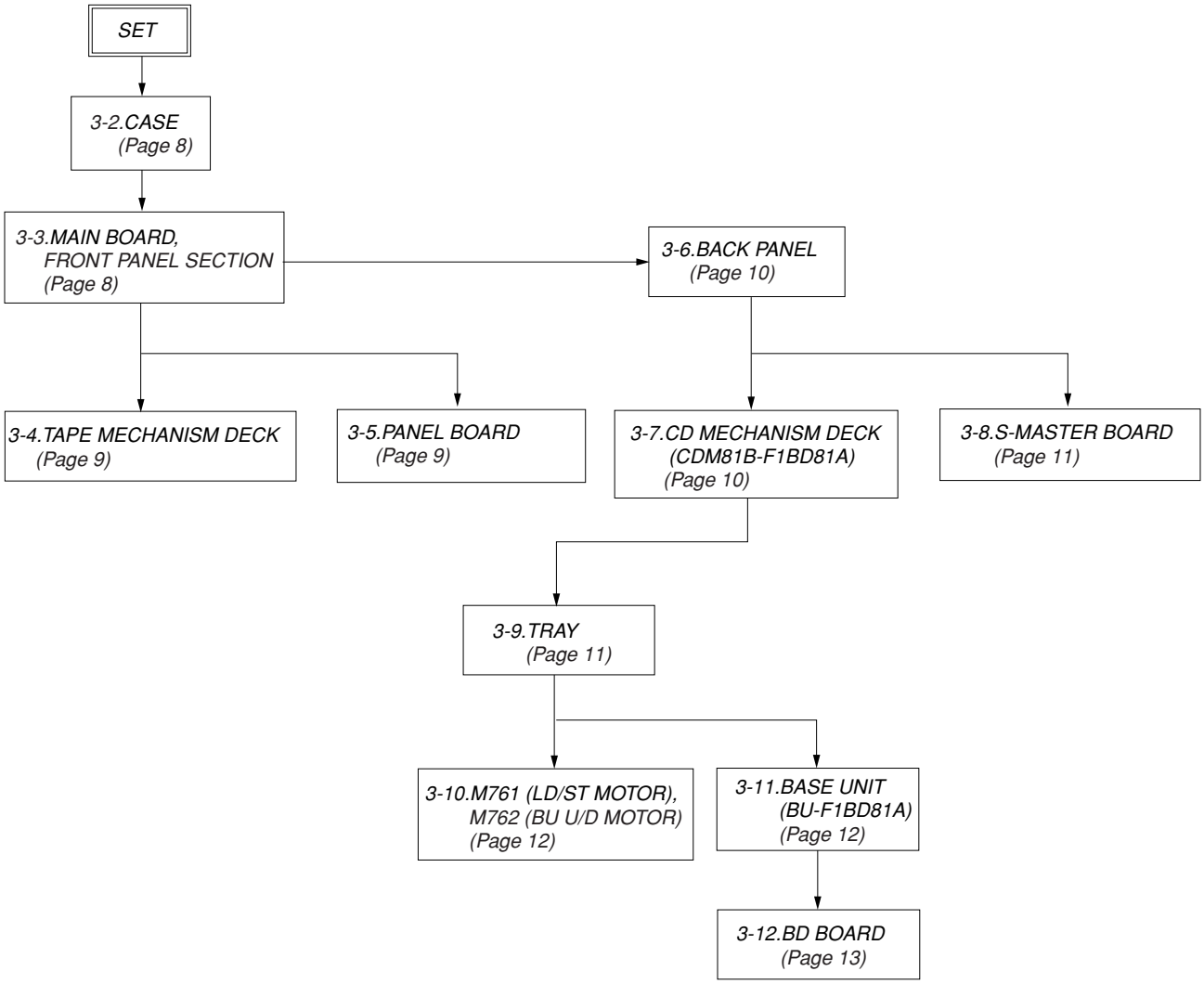
I/⏻ (power) 1
◀◀/▶▶ (rewind/fast forward) 7
► (play) 8
II (pause) 8
■ (stop) 8
⏮/⏭ (go back/go forward) 16
–/+ (tuning) 16



SECTION 3
DISASSEMBLY

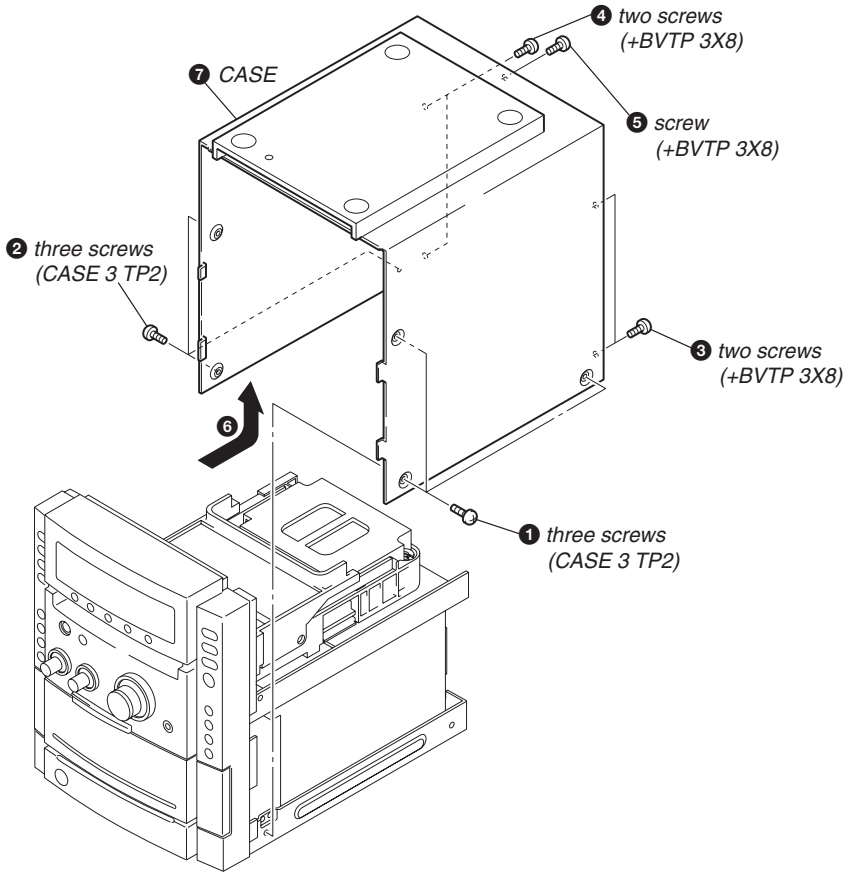
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

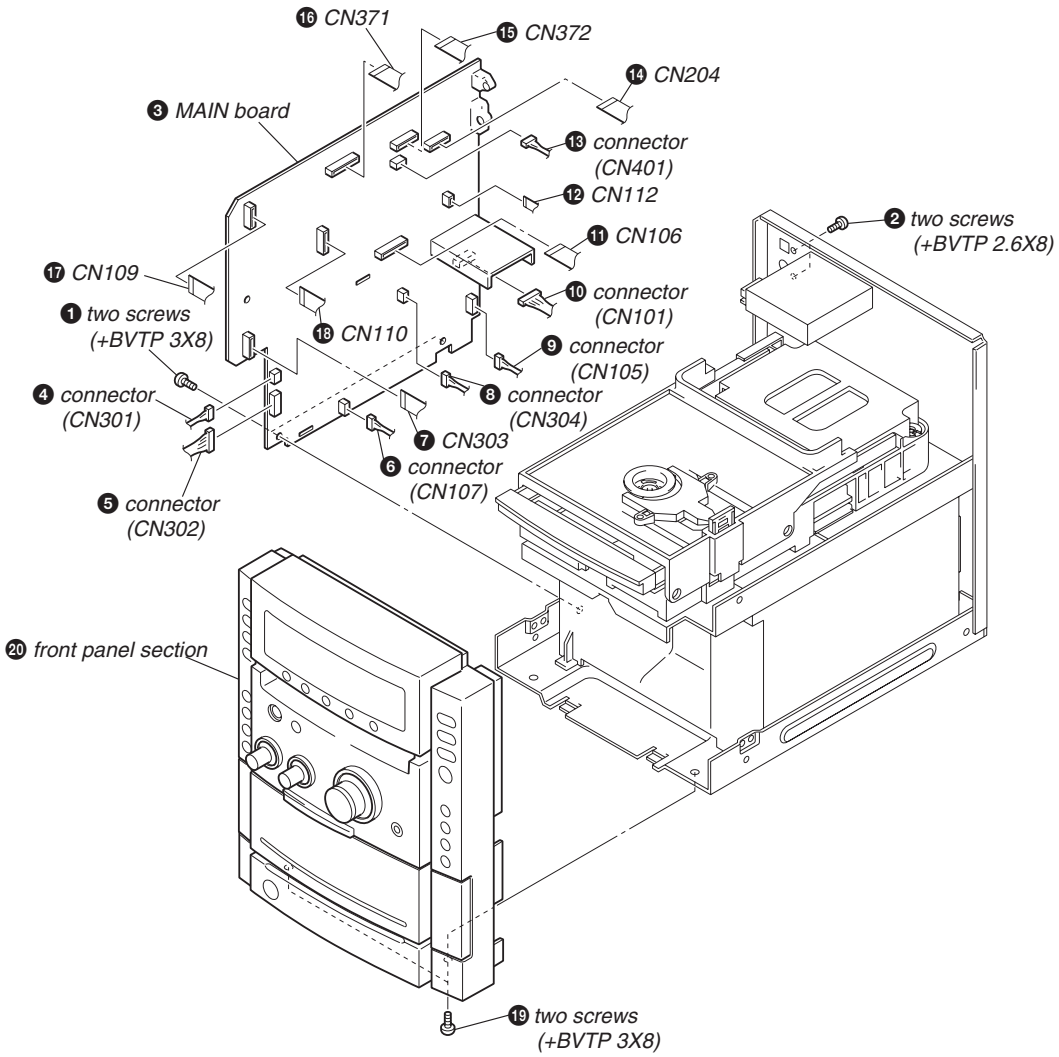


Note: Follow the disassembly procedure in the numerical order given.

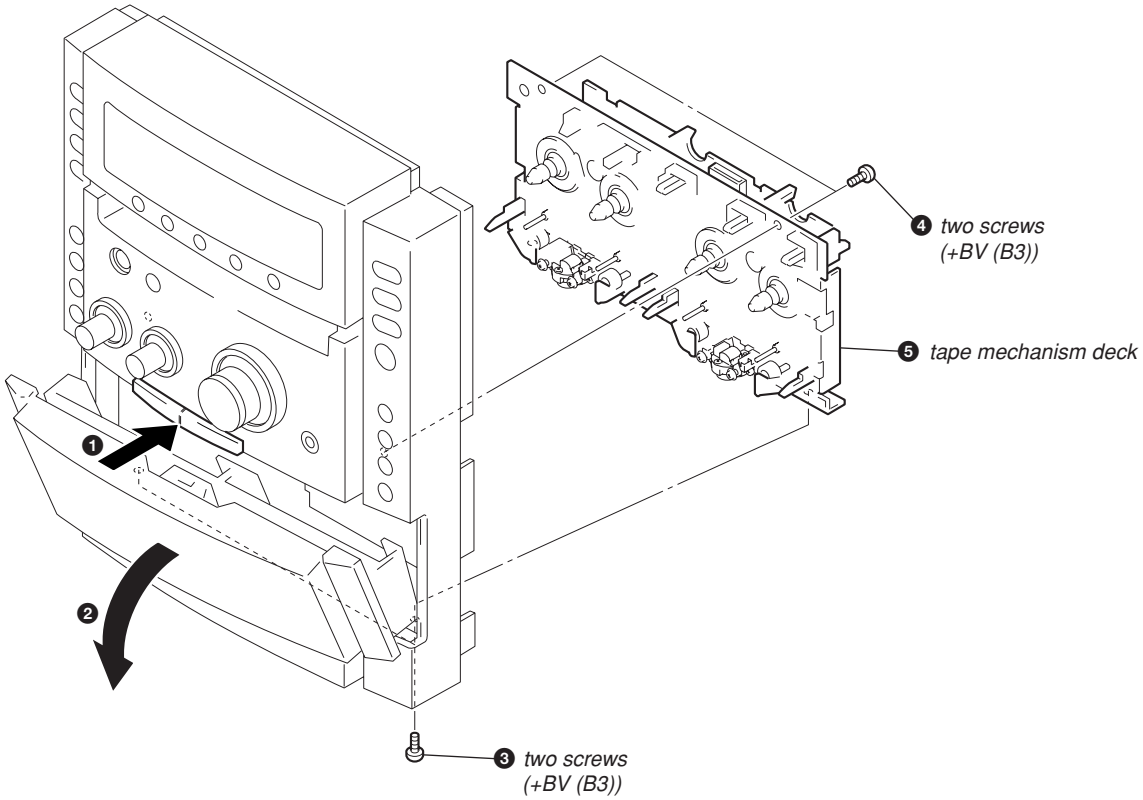
3-2. CASE



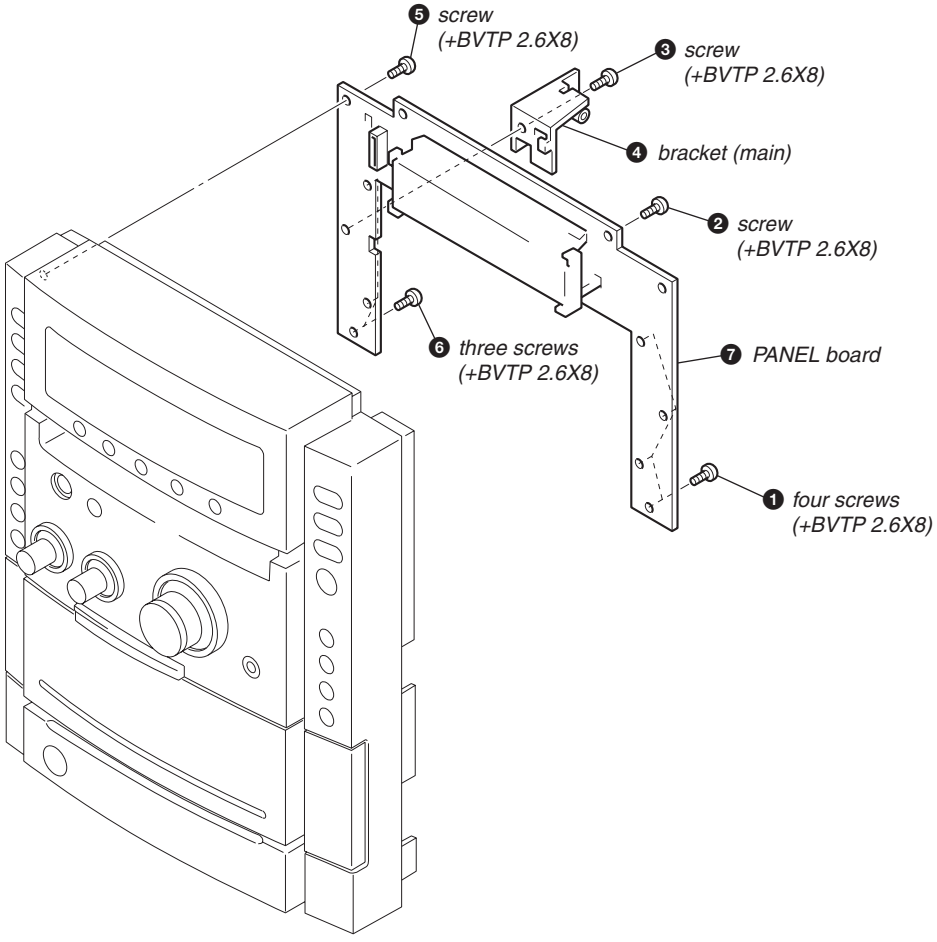
3-3. MAIN BOARD, FRONT PANEL SECTION



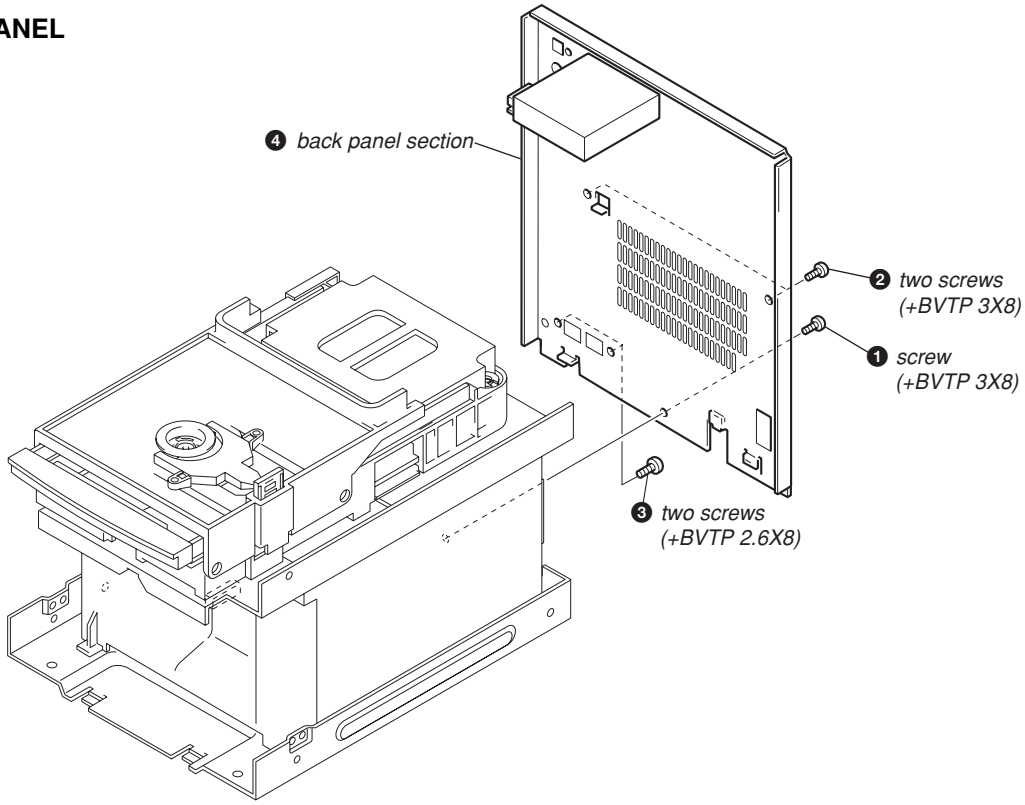
3-4. TAPE MECHANISM DECK



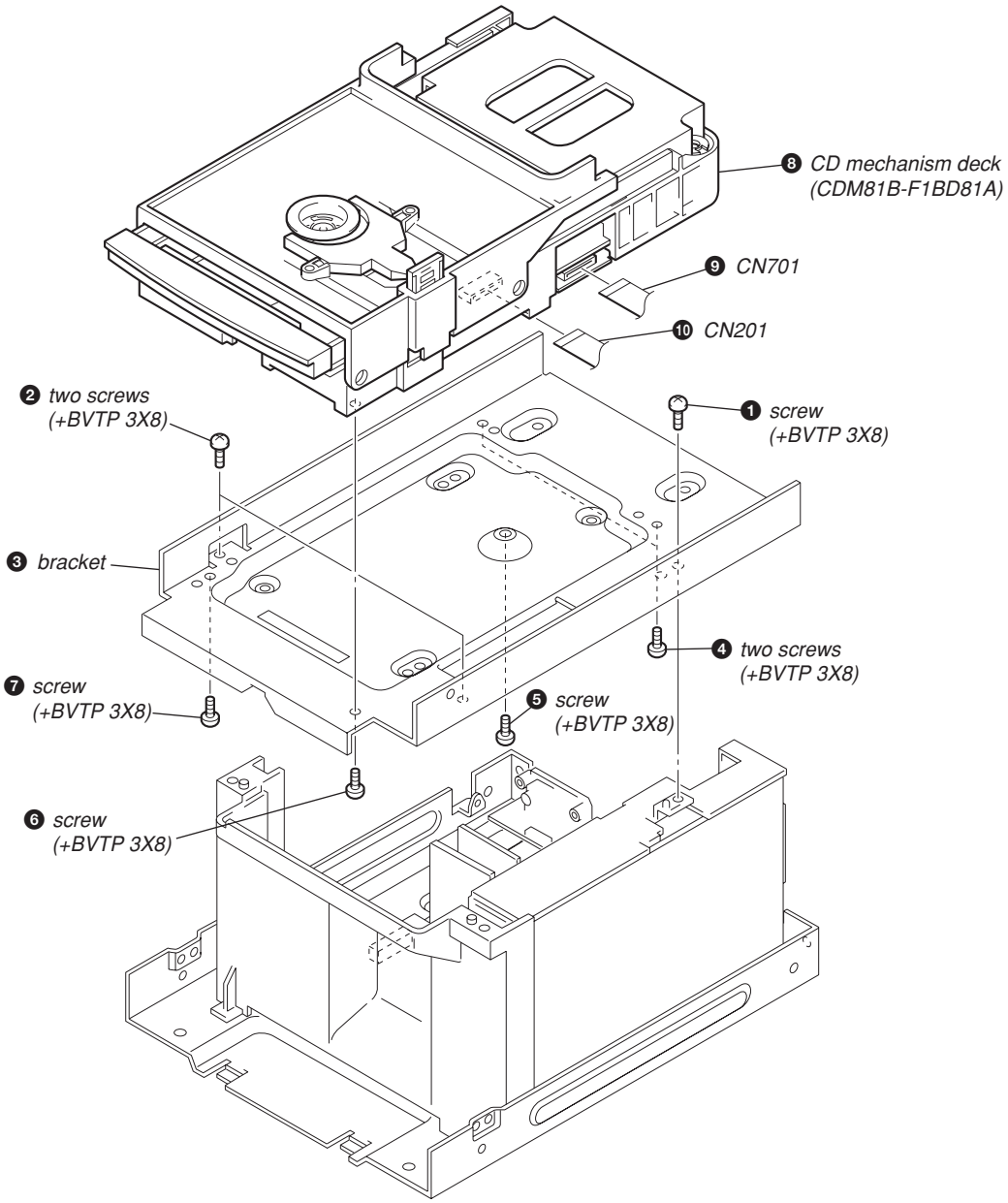
3-5. PANEL BOARD



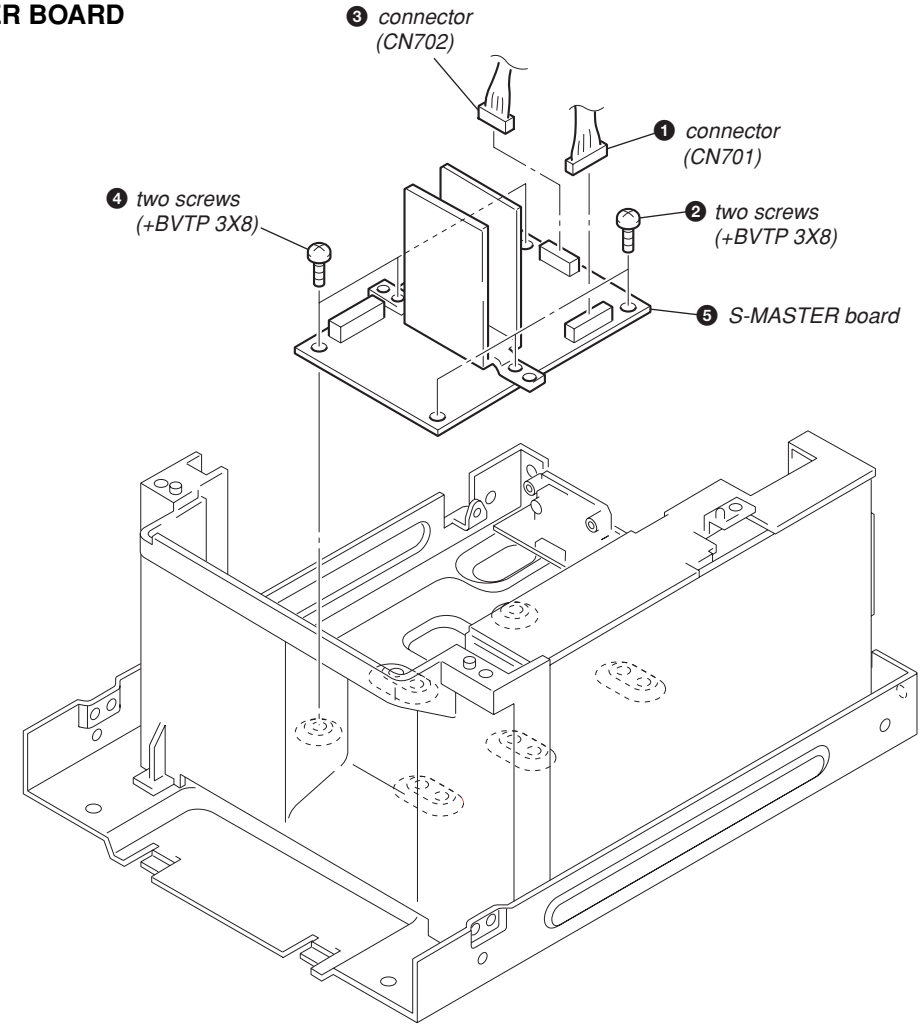
3-6. BACK PANEL



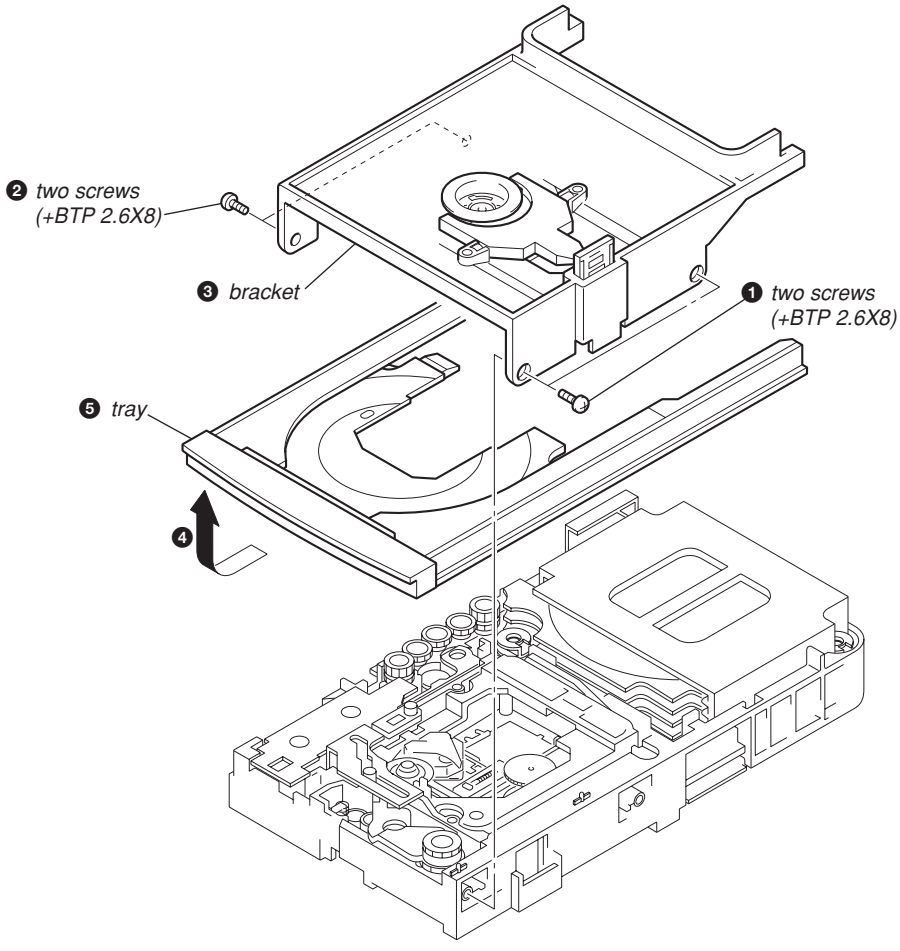
3-7. CD MECHANISM DECK (CDM81B-F1BD81A)



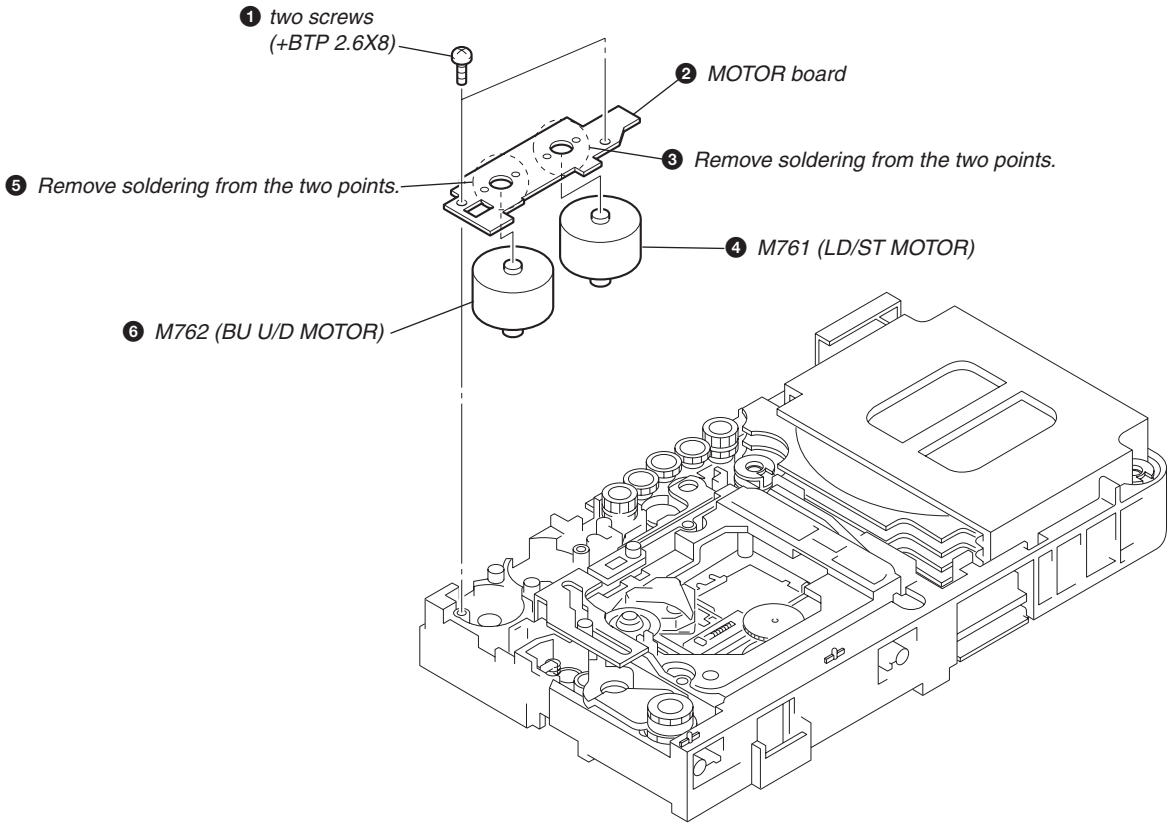
3-8. S-MASTER BOARD



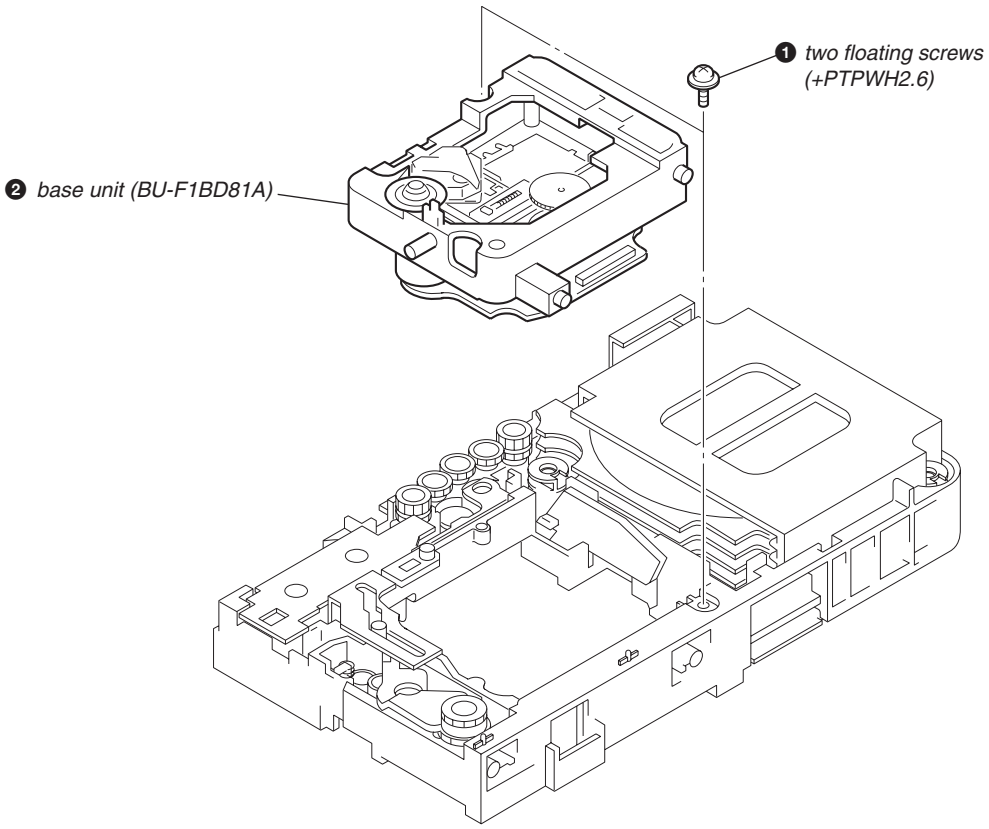
3-9. TRAY



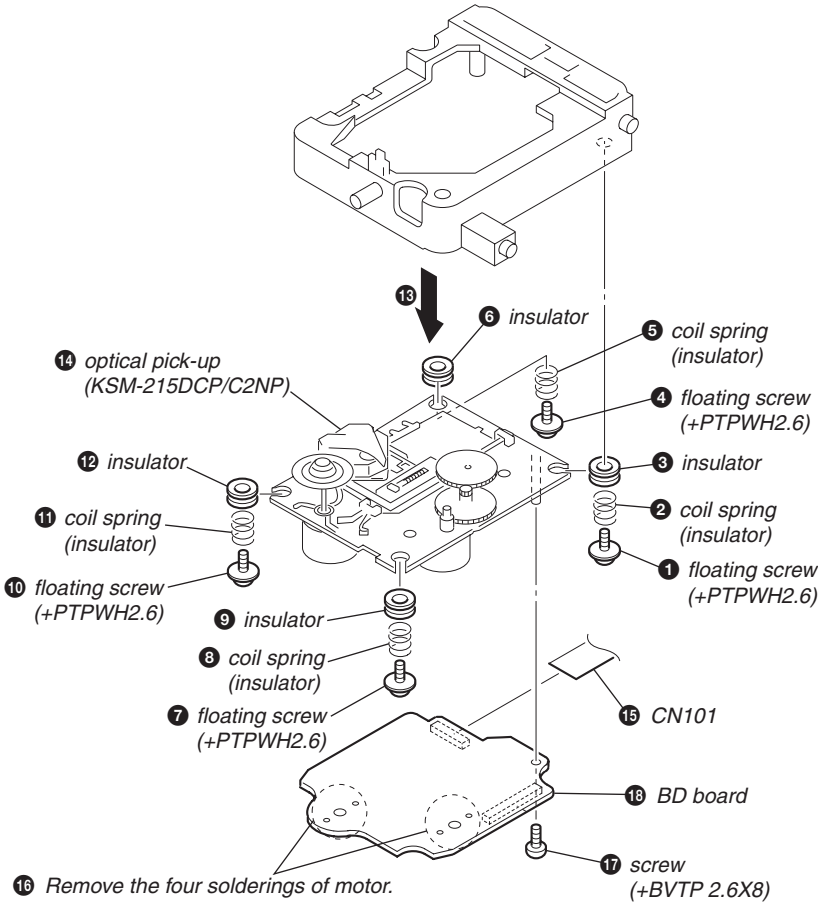
3-10. M761 (LD/ST MOTOR), M762 (BU U/D MOTOR)


❶ two screws
(+BTP 2.6X8)
❷ MOTOR board
❸ Remove soldering from the two points.
❺ Remove soldering from the two points.
❹ M761 (LD/ST MOTOR)
❻ M762 (BU U/D MOTOR)

3-11. BASE UNIT (BU-F1BD81A)



3-12. BD BOARD


⓭
❻ insulator
❺ coil spring (insulator)
❹ floating screw (+PTPWH2.6)
❸ insulator
❷ coil spring (insulator)
❶ floating screw (+PTPWH2.6)
❹ optical pick-up (KSM-215DCP/C2NP)
⓬ insulator
⓫ coil spring (insulator)
❿ floating screw (+PTPWH2.6)
❾ insulator
❽ coil spring (insulator)
❼ floating screw (+PTPWH2.6)
⓯ CN101
⓲ BD board
⓱ screw (+BVTP 2.6X8)
⓰ Remove the four solderings of motor.

SECTION 4
TEST MODE

[Change-over of AM Tuner Step between 9 kHz and 10 kHz]

- A step of AM channels can be changed over between 9 kHz and 10 kHz.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "AM".
3. Press [I/⏻] button to turn the set OFF.
4. Press [■] and [I/⏻] buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9 kHz step" or "AM 10 kHz step", and thus the channel step is changed over.

[Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons [■], [DIMMER] ,and [I/⏻] simultaneously.

[Switching MD/VIDEO Functions]

Procedure:

1. Press the [I/⏻] button to turn the set ON.
2. Press the [I/⏻] button while holding the [VIDEO (MD)] button depressed to toggle between "MD" and "VIDEO." The selected mode is displayed.

[Error code indication]

Procedure:

1. Press the [I/⏻] button to turn the set ON.
2. Select the "CD" function.
3. Press the [■] , [❚❚], and [DISPLAY] buttons simultaneously.
4. The error code is displayed.
5. Press the [TUNING +] button to display the next error code. Press the [TUNING -] button to display the previous error code.

[Aging Mode]

This mode can be used for operation check CD section and Tape deck section.

- If an error occurred:
  The aging operation stops and is displayed status.
- If no error occurs:
  The aging operation continues repeatedly

1. Aging mode in CD section

Procedure:

1. Press [I/⏻] button on the set ON
2. Select the function "CD"
3. Press three buttons [■] , [❚❚], and [DISC 3] simultaneously. The "Aging in" display and aging mode is set.
4. Press [DISC 1] button, starts aging mode of all trays check.
5. Press [DISC 2] button ,starts measurement loading time.
6. To exit from the aging mode perform [Cold Reset].

1) Error display

Disc error	
Display	Error
E00D01022	Focus error (No disc)
E00D02022	Sub Q error (Focus is good)
E00D02023	TOC reading error
E00D02014	Access error (Unable within regular time)

Mechanism error	
Display	Error
E00M__E_0	Error during opening tray
E00M__C_2	EX-CHANGE disc error
E00M__D_0	Error during closing tray
E00M__F_3	EX-OPEN error
E00M__D_5	EX-CLOSE error
E00M__C_2	Chuck-up error
E00M__C_3	Unchucking error

2. Aging mode in Tape Deck section

Procedure:

1. Load the tapes into the decks A and B respectively.
2. Press [I/⏻] button on the set ON
3. Select the function "TAPE A"
4. Press three buttons [■] , [❚❚] , and [TAPE A/B] simultaneously, and aging mode is started.
5. To exit from the aging mode perform [Cold Reset].

- In the aging mode ,the program is executed in the following sequence.

Step	Operation	Display
1	Rewind the TAPE A	TAPE A AG-1
2	Rewind the TAPE B	TAPE B AG-1
3	Play the TAPE A (→) (2 minute)	TAPE A AG-2
4	F•F. (AMS) the TAPE A	TAPE A AG-3
5	Play the TAPE A (←) (2 minute)	TAPE A AG-4
6	Rewind the TAPE A	TAPE A AG-5
7	Play the TAPE B (→) (2 minute)	TAPE B AG-2
8	F•F.(AMS) the TAPE B	TAPE B AG-3
9	Play the TAPE B (←) (2 minute)	TAPE B AG-4
10	Rewind the TAPE B	TAPE B AG-5

[GC Test Mode]

- All fluorecent segments and LEDs are tested.
- Microprocessor virsion.
- Keyboard check.
- Display check.

Procedure:

1. To enter the test mode, press the three buttons ■ , ❚❚ and TUNER/BAND simultaneously.
2. All segments and LEDs (without STANDBY LED) are turned on.
3. Press the TUNING - button to increment the microprocessor software version.
4. Press the TUNING + button to change the indication for the microprocessor software version.
3. Press the ◄ ► button to set the check mode for the entries (KEY, JOG, etc.).
4. Press the ❚❚ button to display the current VACS level.
7. Press the ■ button to enter the mode to check the display. If you press this button repeatedly, the display will change sequentially as the button is pressed.
8. Press the ■,❚❚ and TUNER/BAND buttons simultaneously to set the standby mode.

[CD Service Mode]

- This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pick-up.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function “CD”.
3. To enter the test mode, press three buttons ■,❚❚ , and DISC 1 simultaneously.
4. The CD service mode is selected.The message ‘‘CD SERVICE MODE’’ is displayed.
5. While holding the TUNING - button depressed , to move the sled to the inside. “SLED IN” is displayed.
   While holding the TUNING + button depressed, to move the sled to the outside. “SLED OUT” is displayed.
6. Press the CD SYNC button so that “LD ON” and “LD OFF” are displayed to switch between Laser ON/OFF.
7. To exit from this mode, perform as follows:
   1) Move the pick-up to the most inside track.
   2) Press I/⏻ button to turn the set OFF.

Note:
- Always move the pick-up to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

[MC Test Mode] (Amplifier SECTION)

- This mode is used to test the function of the amplifier section.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. To enter the test mode, press the three buttons ■, ❚❚ and ●/START simultaneously.
3. Turn VOLUME knob to counter-clockwise, the function of the equalizer is set to “MIN”.
4. Turn VOLUME knob to clockwise, the function of the equalizer is set to “MAX”.
5. Whenever turn BASS knob to clockwise, the display switches as follows.
   “TONE MAX” →“TONE MIN” →“TONE FLAT”
6. To exit from this mode, press I/⏻ button to turn the set OFF.

[MC Test Mode] (Tape section)

- This mode is used to test the functions of the Tape Procedure.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. To enter the test mode, press the three buttons ■, ❚❚ and ●/START simultaneously.
3. While holding the DIMMER button depressed, turn the ALC ON.
4. Press the ●/START button to start REC (recording).
5. While recording, press the TUNING + button to perform automatic rewind and automatic playback (for FF version). Also, press the TUNING - button to perform automatic rewind and automatic playback (for FR version).
6. Select the function “TAPE A” or “TAPE B”
7. Press the CD-SYNC button while “TAPE A” or “TAPE B” is selected, to perform AMS check. “EDG□” is displayed. A number appears inside□.
8. To exit from this mode, press I/⏻ button to turn the set OFF.

[CD Ship Mode (LOCK)]

- This mode moves the pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function “CD”.
3. Press ■ button and CD button simultaneously.
4. The “STANDBY” display blinks instantaneously, and the CD ship mode is set.
5. To fluorescent indicator tube displays ‘‘LOCK’’.

[CD Ship (LOCK) & COLD RESET MODE]

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function “CD”.
3. Press three buttons ■, ❚❚ and VIDEO (MD) simultaneously.
4. The “STANDBY” display blinks instantaneously and CD ship mode is set.
5. To fluorescent indicator tube displays “LOCK” and the set is reset.

[CD power -manage function]

Procedure:

1. Press I/⏻ button to the set ON
2. Select the function “CD”.
3. Press I/⏻ button to turn the set OFF.
4. Press ■ and I/⏻ buttons simultaneously ,and the display of fluorescent indicator tube changes “CD POWER OFF” or “CD POWER ON”.
5. Press I/⏻ button to turn the set OFF.

[DISC Tray Lock]

Procedure:

1. Press [I/⏻] button to the set ON.
2. Select the function “CD”.
3. Press [■] and [CD ⏏] buttons simultaneously for 5 seconds. And the displays of fluorescent indicator tube changes to “LOCKED” or “UNIOCKED”.
4. Press [I/⏻] button to turn the set OFF.

[CD Repeat 5 Times Limit Release Mode]

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function “CD”.
3. Press three buttons [■] , [❚❚] and [CD SYNC] simultaneously.
4. The message “LIMIT OFF” is displayed.
5. Press [I/⏻] button the set OFF.

[AMP TEST MODE]

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. To enter the test mode, press three buttons [■] , [❚❚] and [DSGX] simultaneously.
3. Display will changes ‘‘VACS ON’’ to ‘‘VACS OFF’’.
4. Press [I/⏻] button to turn the set OFF.

SECTION 5
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback heads pinch rollers
   erase head rubber belts
   capstan idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
REV	CQ-102RC	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	6.96 N • m to 14.02 N • m 71 to 143 g • cm (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	9.80 N • m 100 g or more (3.53 oz or more)
REV tension	CQ-403R	9.80 N • m 100 g or more (3.53 oz or more)

SECTION 6
ELECTRICAL ADJUSTMENTS

DECK SECTION 0 dB=0.775 V

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

• Test Tape

Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment

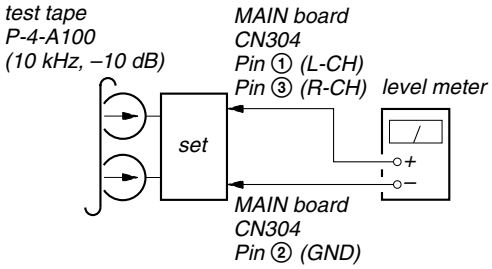
RECORD/PLAYBACK HEAD AZIMUTH ADJUST-MENT

DECK A **DECK B**

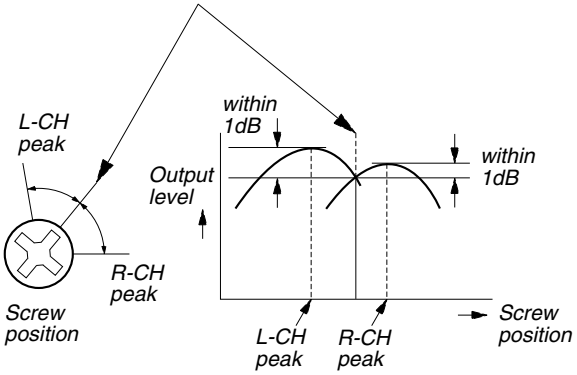
Note: Perform this adjustments for both decks

Procedure:

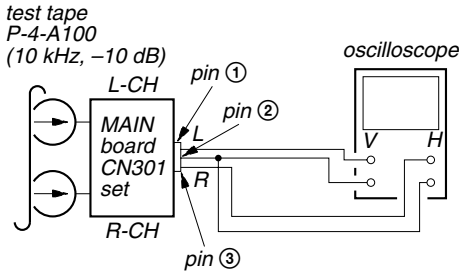
1. Mode: Playback

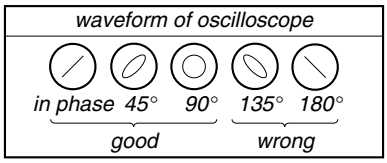


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.



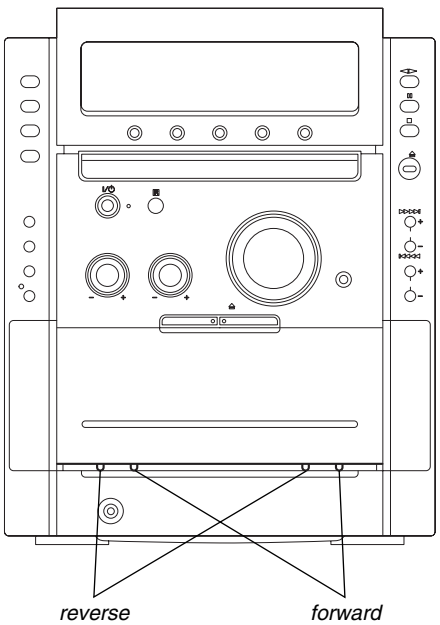
3. Mode: Playback





4. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Playback Head (Deck A).
Record/Playback/Erase Head (Deck B).



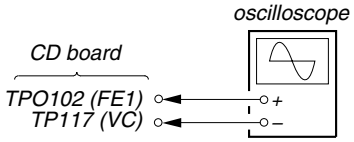
CD SECTION

Note:

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MW impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-curve Check

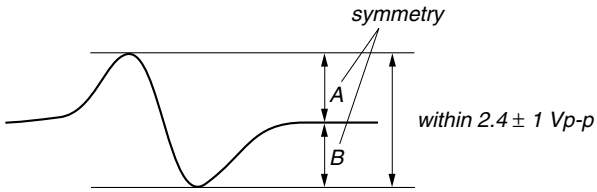
Connection:



Procedure:

1. Connect an oscilloscope to test point TPO102 (FE1) and TP 117(VC) on the CD board.
2. Turn the power on.
3. Put the disc (YEDS-18) in and turned power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out)
4. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 2.4 ± 1 Vp-p.

S-curve waveform



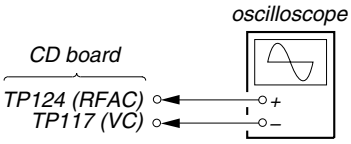
Note:

- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

Checking Location: CD board (SIDE B)
(See page 20.)

RFAC Level Check

Connection:

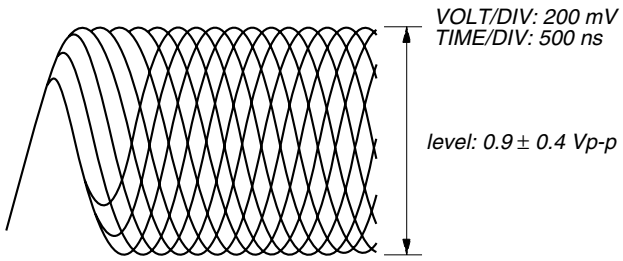


Procedure:

1. Connect an oscilloscope to test point TP124 (RFAC) and TP 117(VC) on the CD board.
2. Turn the power on.
3. Put the disc (YEDS-18) in to playback the number five track.
4. Confirm that oscilloscope waveform is clear and check RFAC signal level is correct or not.

Note: A clear RFAC signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

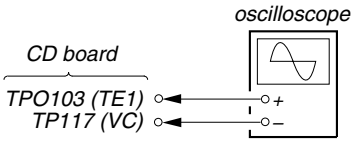
RFAC signal waveform



Checking Location: CD board (SIDE B)
(See page 20.)

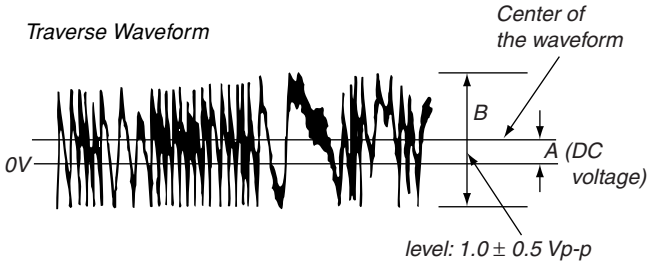
E-F Balance Check

Connection:



Procedure:

1. Connect an oscilloscpe to test point TPO103 (TE1) and TP117 (VC) on the CD board.
2. Turn the power on.
3. Select the function "CD".
4. Press three buttons of [ENTER], [▶▶] , and [SURRUUND MODE] simultaneously to set the CD service mode.
5. Put the disc (YEDS-18) in to playback the number five track.
6. Press the [I◀◀] button. The message "TRAVERSE" is displayed. (The tracking servo and the sledding servo are turned OFF)
7. Check the level B of the oscilliscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following :
   A/B x 100 = less than ± 22%

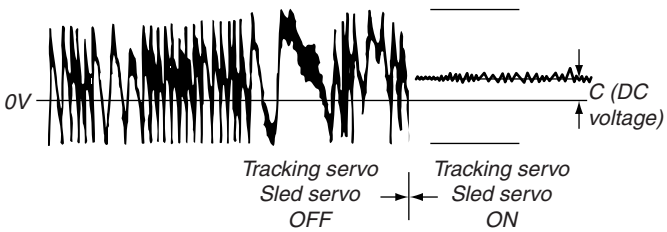


8. Press the [I◀◀] button. The message "TRAVERSE" is displayed. (The tracking servo and sledding servo are turned ON)
   Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 5.
9. To exit from this mode, perform as follows.
   1) Move the optical pick-up to the most inside track.
   2) Press three buttons of [■], [CLEAR], and [DISPLAY] simultaneously. (cold reset)

Notes:

- Always move the optical pick-up to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
- Do not run the sled motor excessively, otherwise the gear can be chipped.

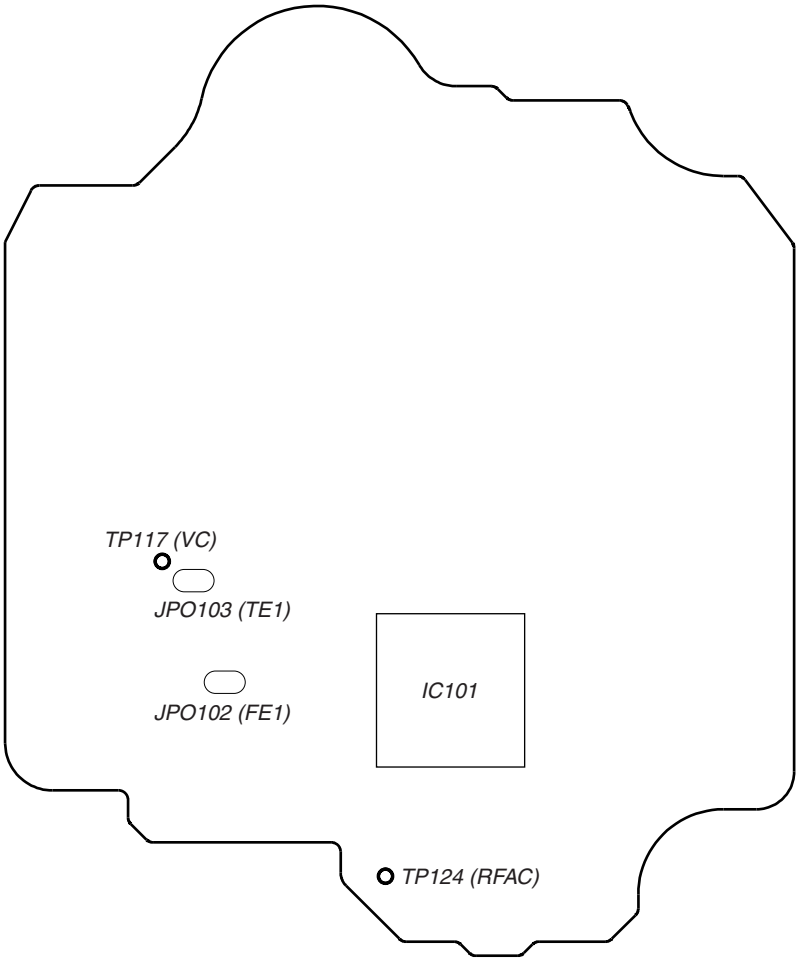
Traverse Waveform



Checking Location: CD board (SIDE B) (See page 20.)

Checking Location:

– CD BOARD (SIDE B) –



SECTION 7
DIAGRAMS

For schematic diagrams.
Note:
- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
- : nonflammable resistor.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ! are critical for safety.
Replace only with part number specified.

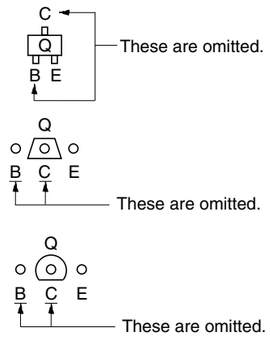
- : panel designation.
- : B+ Line.
- : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: TUNER (FM/AM)
  ( ): CD PLAY
  < >: TAPE PLAY
  [ ]: TAPE REC
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : TUNER (FM/AM)
  : TAPE PLAY (DECK A)
  : TAPE PLAY (DECK B)
  : RECORD
  : CD PLAY (ANALOG OUT)
  : CD PLAY (DIGITAL OUT)

- Abbreviation
  E3 : 240V AC Area in E model
  E51 : Chilean and Peruvian model
  EA : Saudi Arabia mdoel
  RU : Russian model

Note on Printed Wiring Boards:
Note:
- : parts extracted from the component side.
- : Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated.)

Caution:	
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.

- Indication of transistor.



- Abbreviation
  E3 : 240V AC Area in E model
  E51 : Chilean and Peruvian model
  EA : Saudi Arabia mdoel
  RU : Russian model

- **WAVEFORMS**

– MAIN BOARD –

① IC401 ⑩ XC-IN

VOL/DIV : 0.5 V AC
TIME/DIV : 2.0 µsec

② IC401 ⑮ X-IN

VOL/DIV : 0.5 V AC
TIME/DIV : 50 nsec

– BD BOARD –

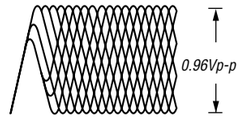
① IC101 ㉑ TEI

VOL/DIV : 0.2 V AC
TIME/DIV : 0.2 msec

② IC101 ㉓ FEI

VOL/DIV : 0.1 V AC
TIME/DIV : 1 msec

③ IC101 ㊶ RFACO



VOL/DIV : 0.2 V AC
TIME/DIV : 0.5 µsec

– S-MASTER BOARD –

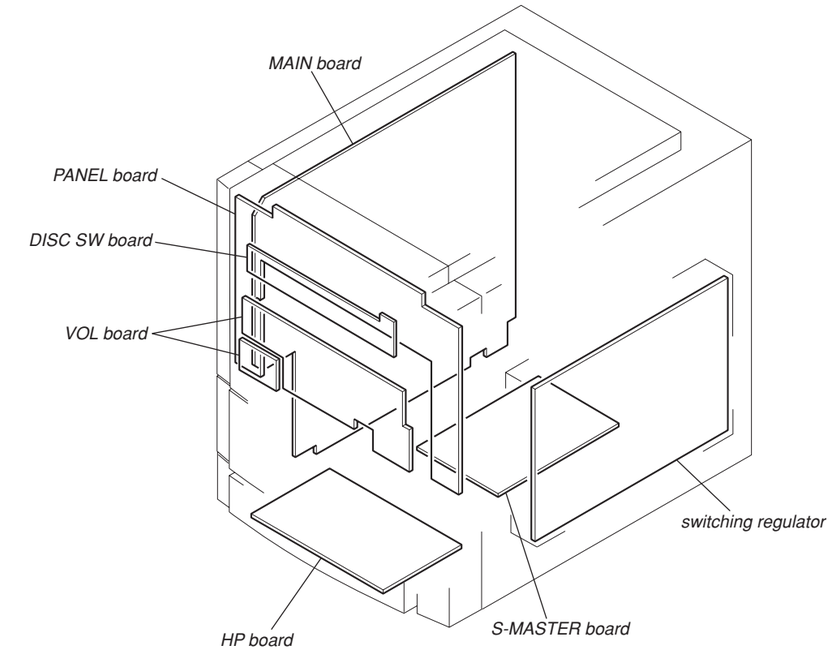
① IC705 ㊽ XFSOIN

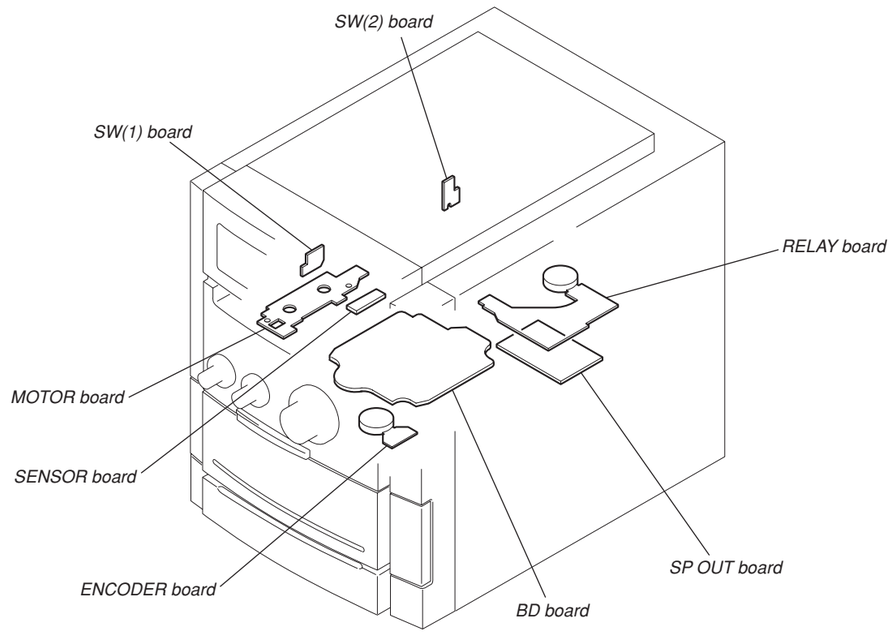
VOL/DIV : 2 V AC
TIME/DIV : 20 nsec

② IC703 ⑥

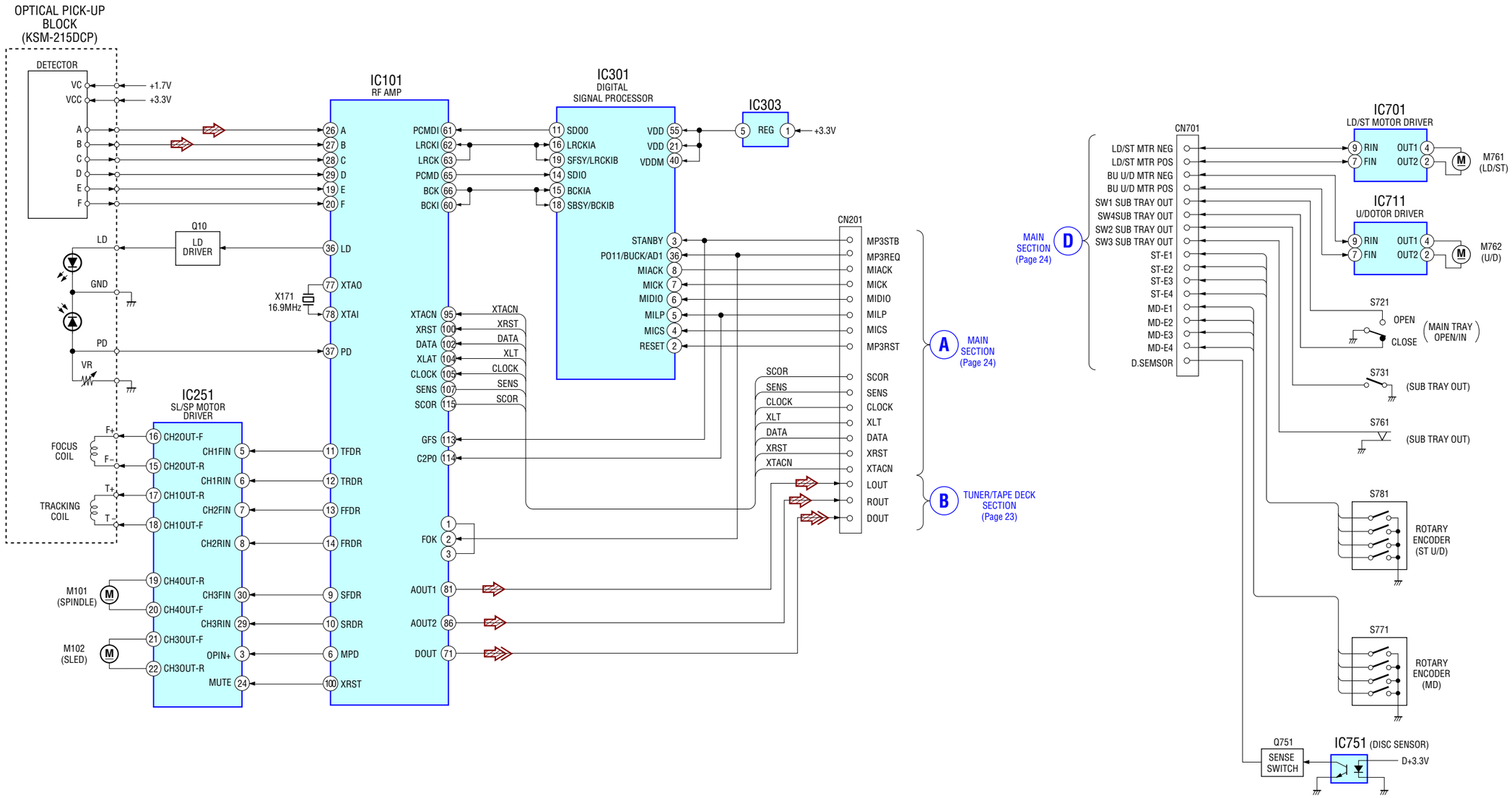
VOL/DIV : 1 V AC
TIME/DIV : 50 nsec

7-1. CIRCUIT BOARD LOCATION



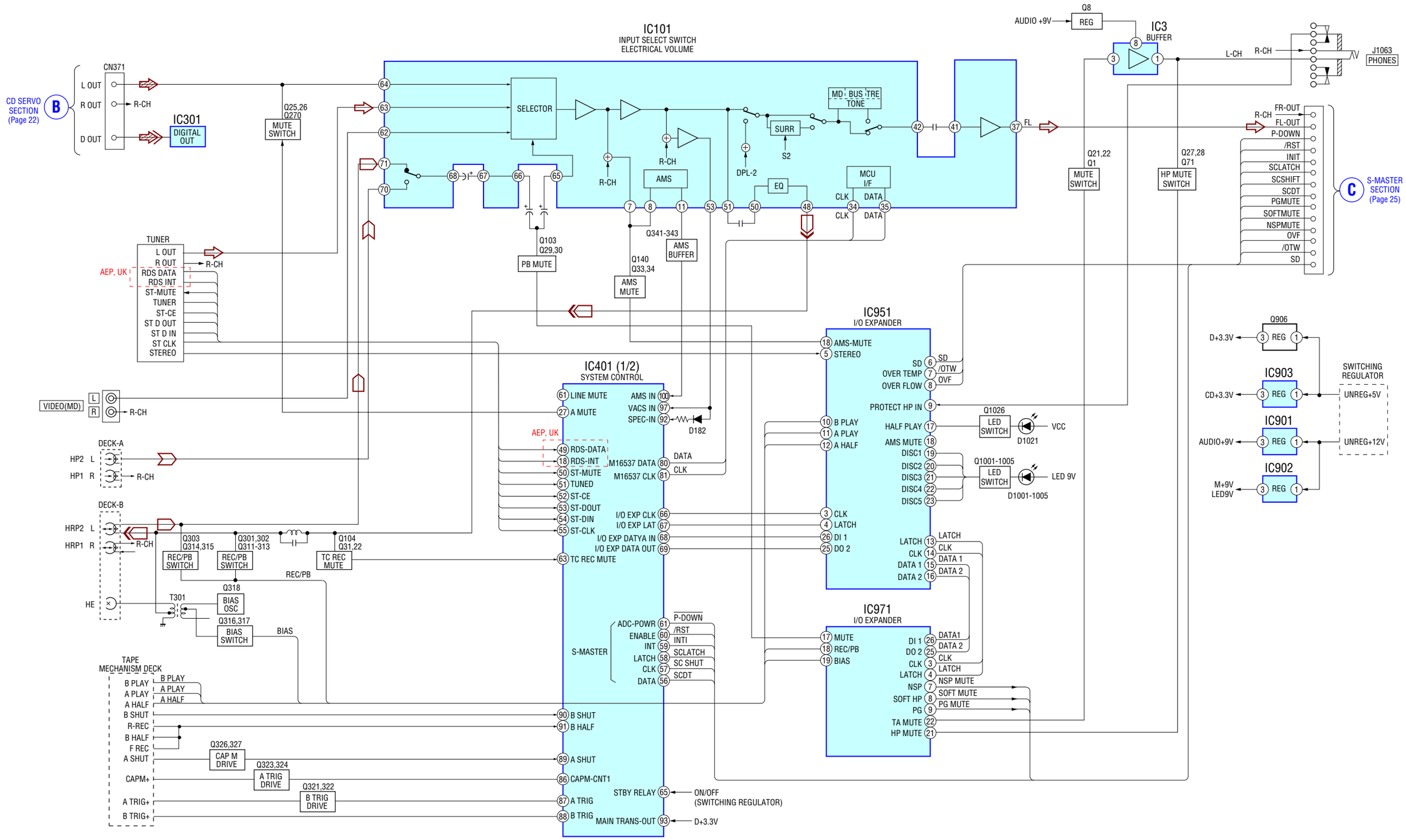


7-2. BLOCK DIAGRAM – CD SERVO SECTION –



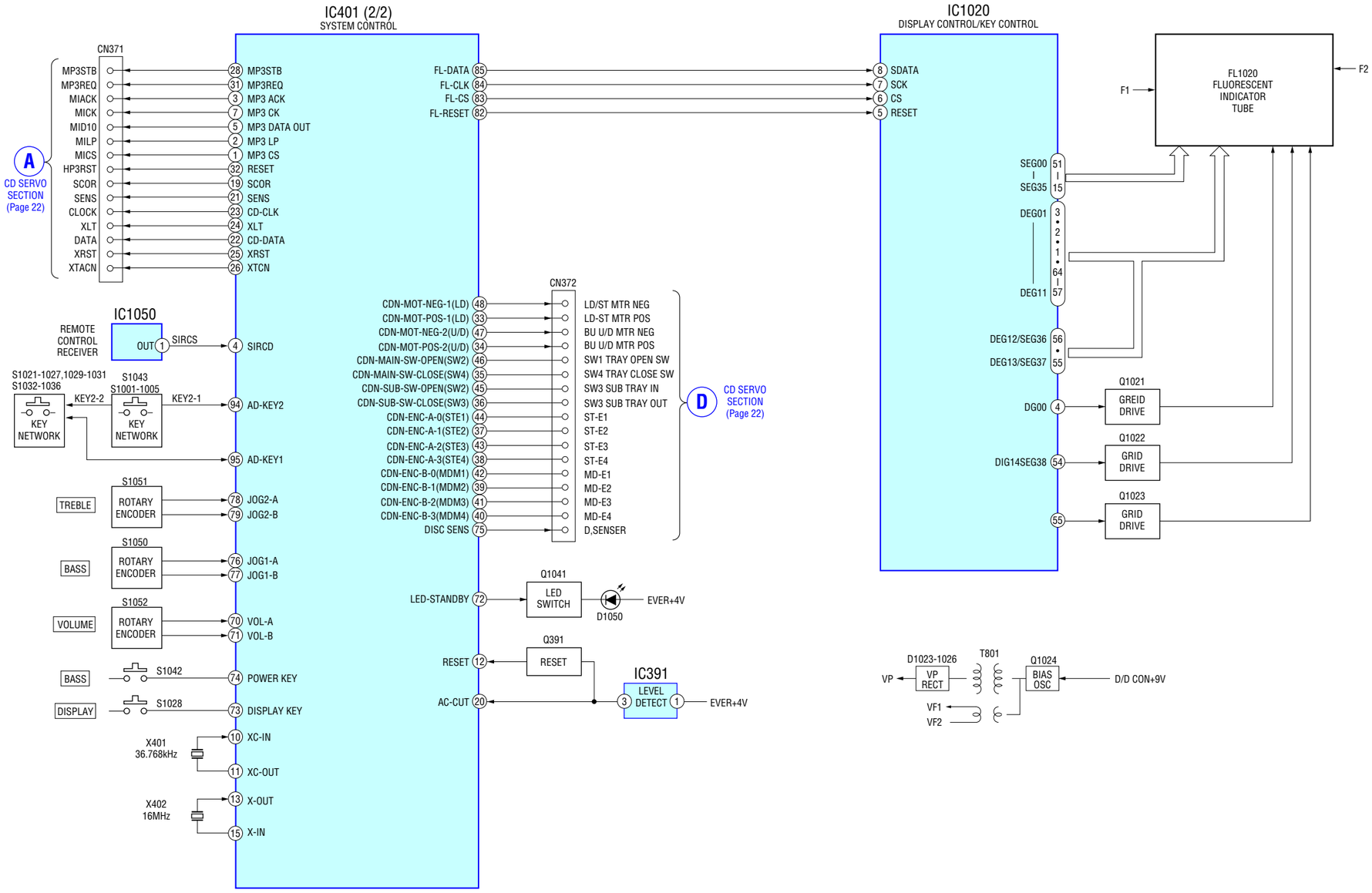
- Signal path
  - : CD PLAY (ANALOG)
  - : CD PLAY (DIGITAL)

7-3. BLOCK DIAGRAM – TUNER/TAPE DECK SECTION –

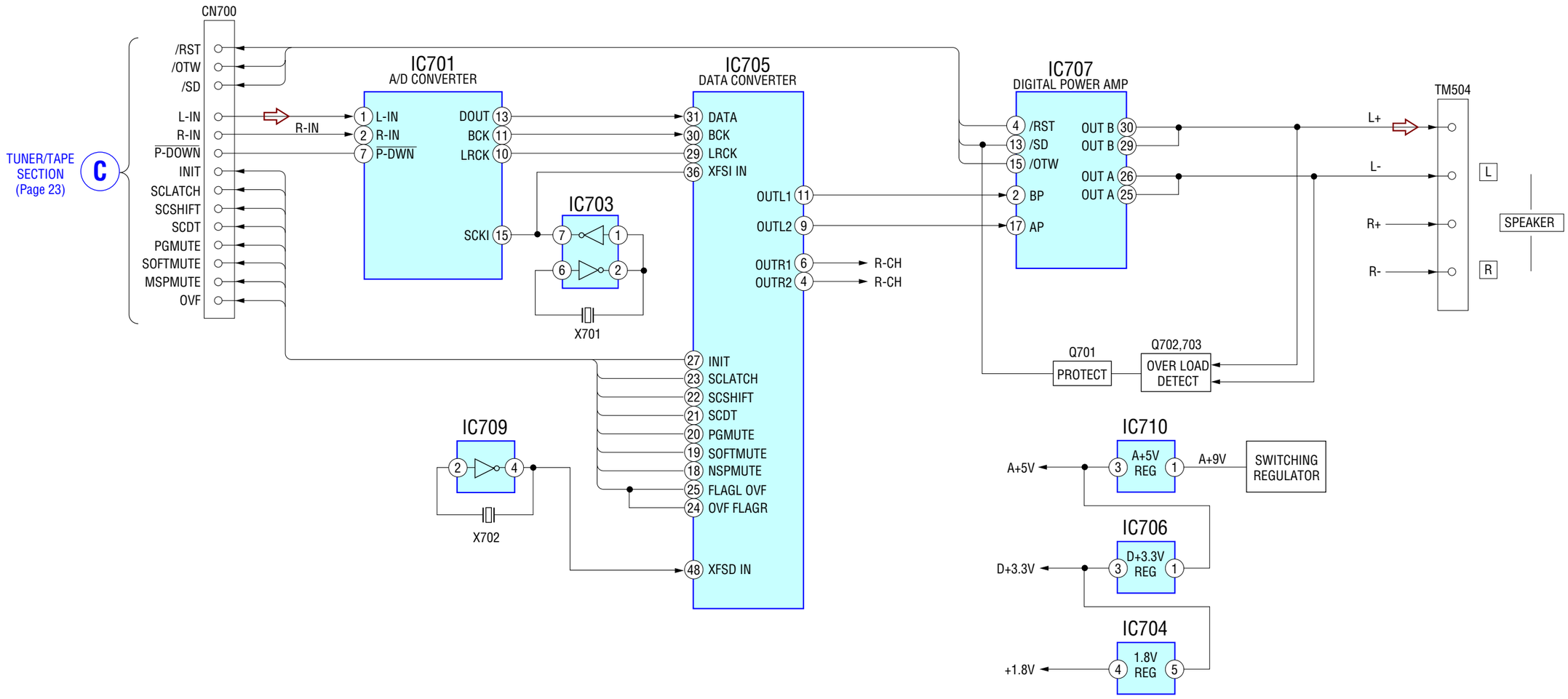


- R-ch is omitted due to same as L-ch.
- Signal path
  - : TUNER (FM/AM)
  - : PLAYBACK (DECK A)
  - : PLAYBACK (DECK B)
  - : RECORD
  - : CD PLAY (ANALOG)
  - : CD PLAY (DIGITAL)

7-4. BLOCK DIAGRAM – MAIN SECTION –



7-5. BLOCK DIAGRAM – S-MASTER SECTION –

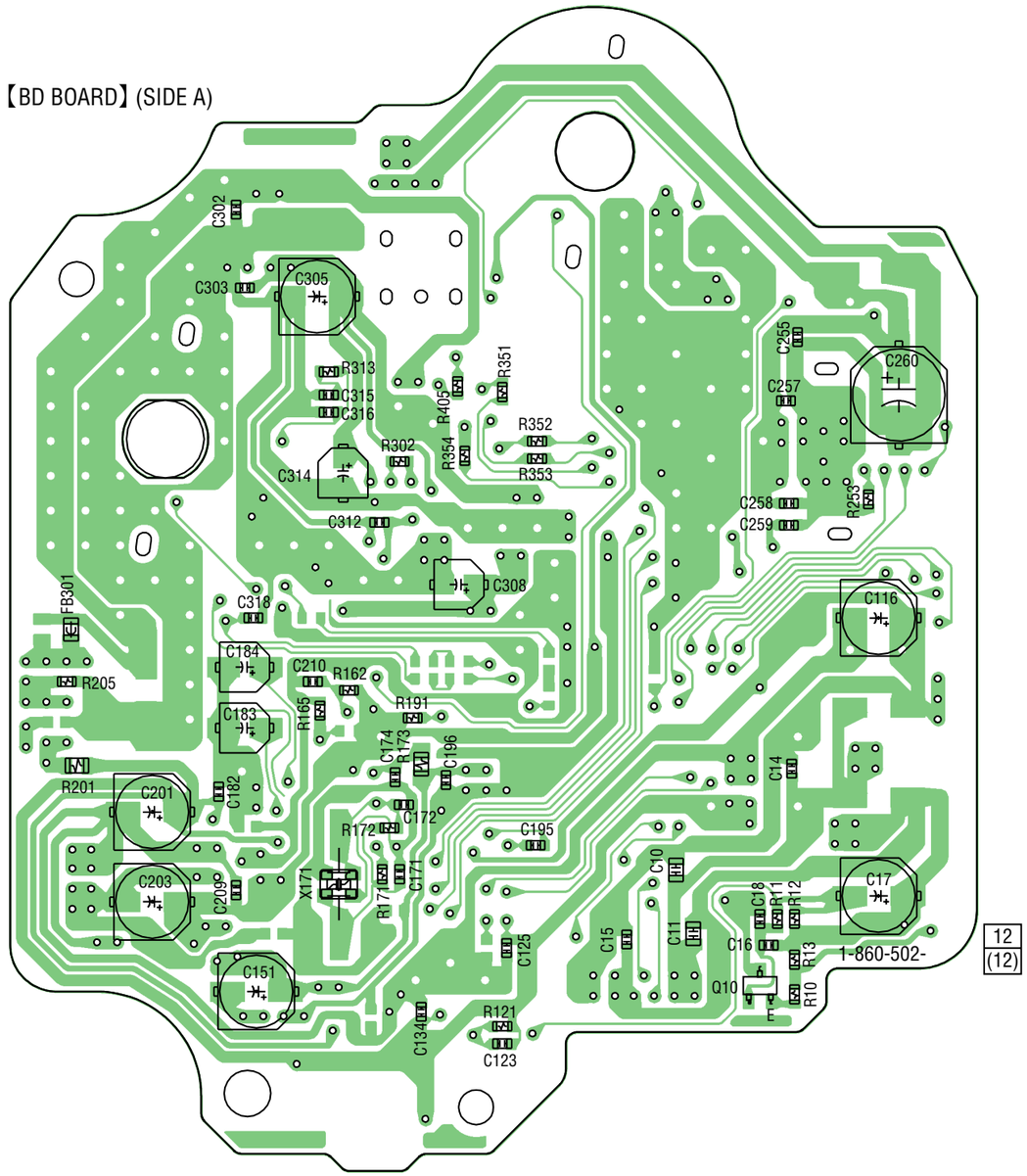


- R-ch is omitted due to same as L-ch.
- Signal path
  ⇨ : AUDIO

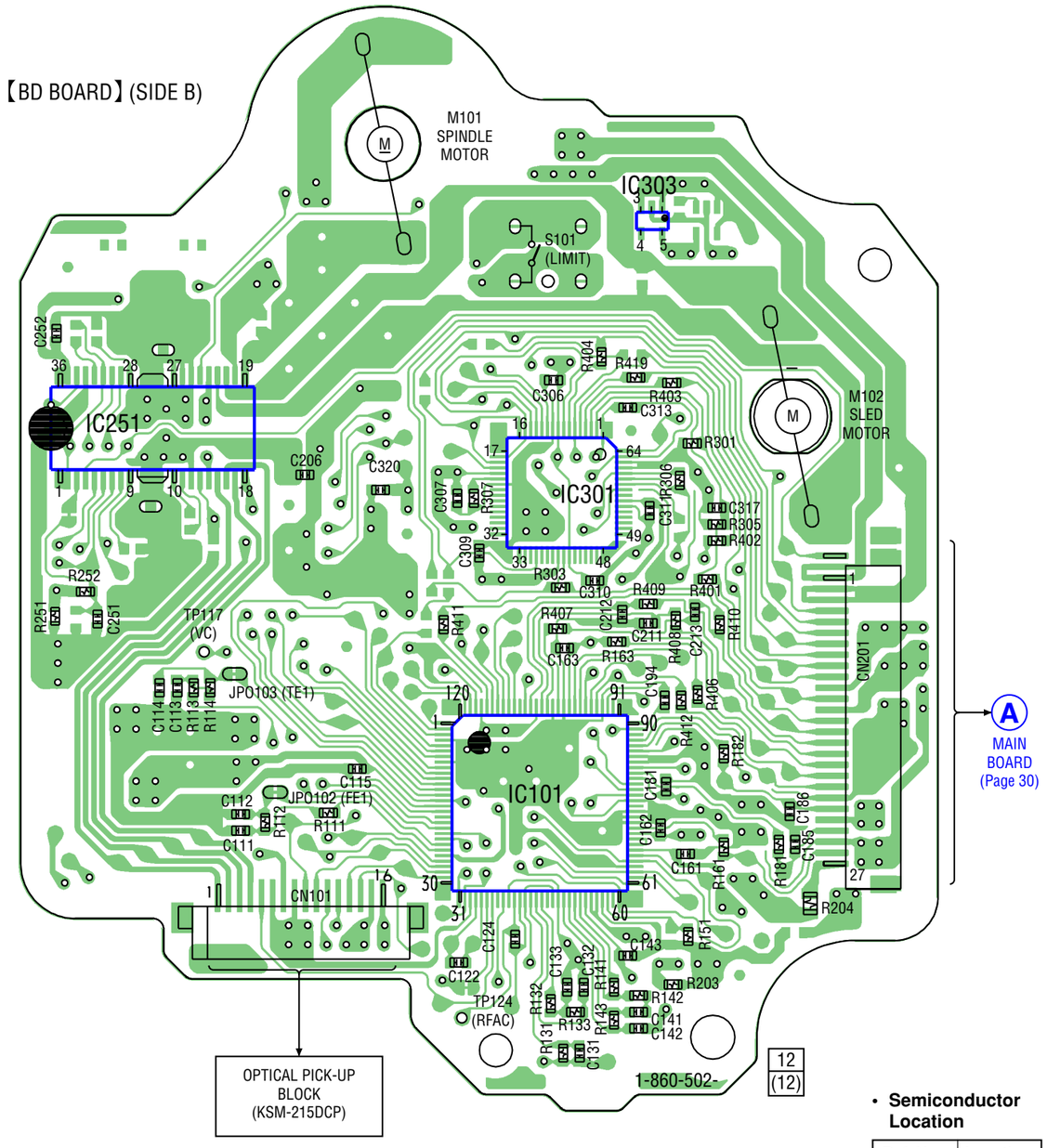
7-6. PRINTED WIRING BOARD – BD SECTION –

• See page 21 for Circuit Boards Location.

【BD BOARD】(SIDE A)



【BD BOARD】(SIDE B)

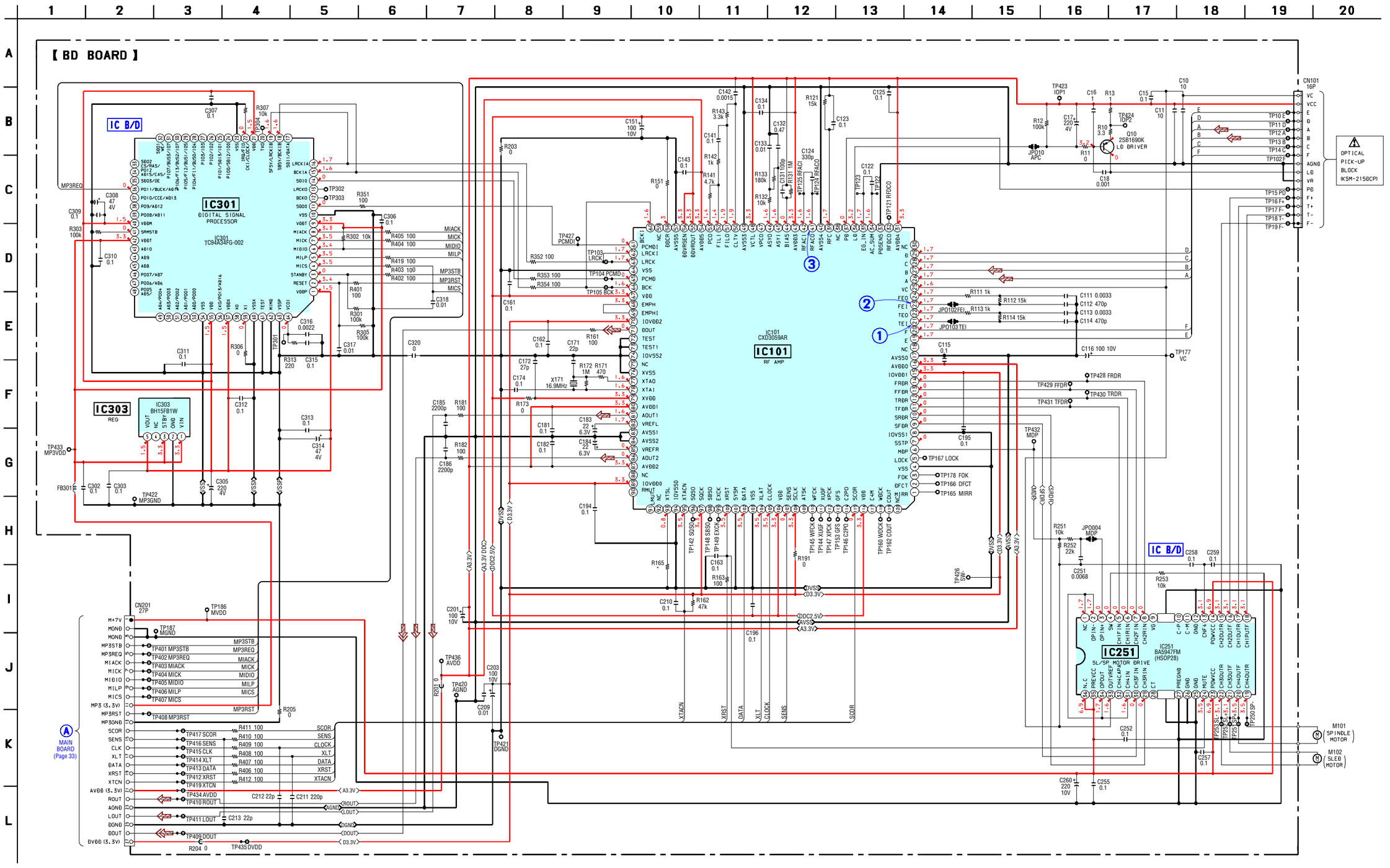


• **Semiconductor Location**

Ref. No.	Location
IC101	D-8
IC251	C-6
IC301	C-8
IC303	B-8
Q10	E-4

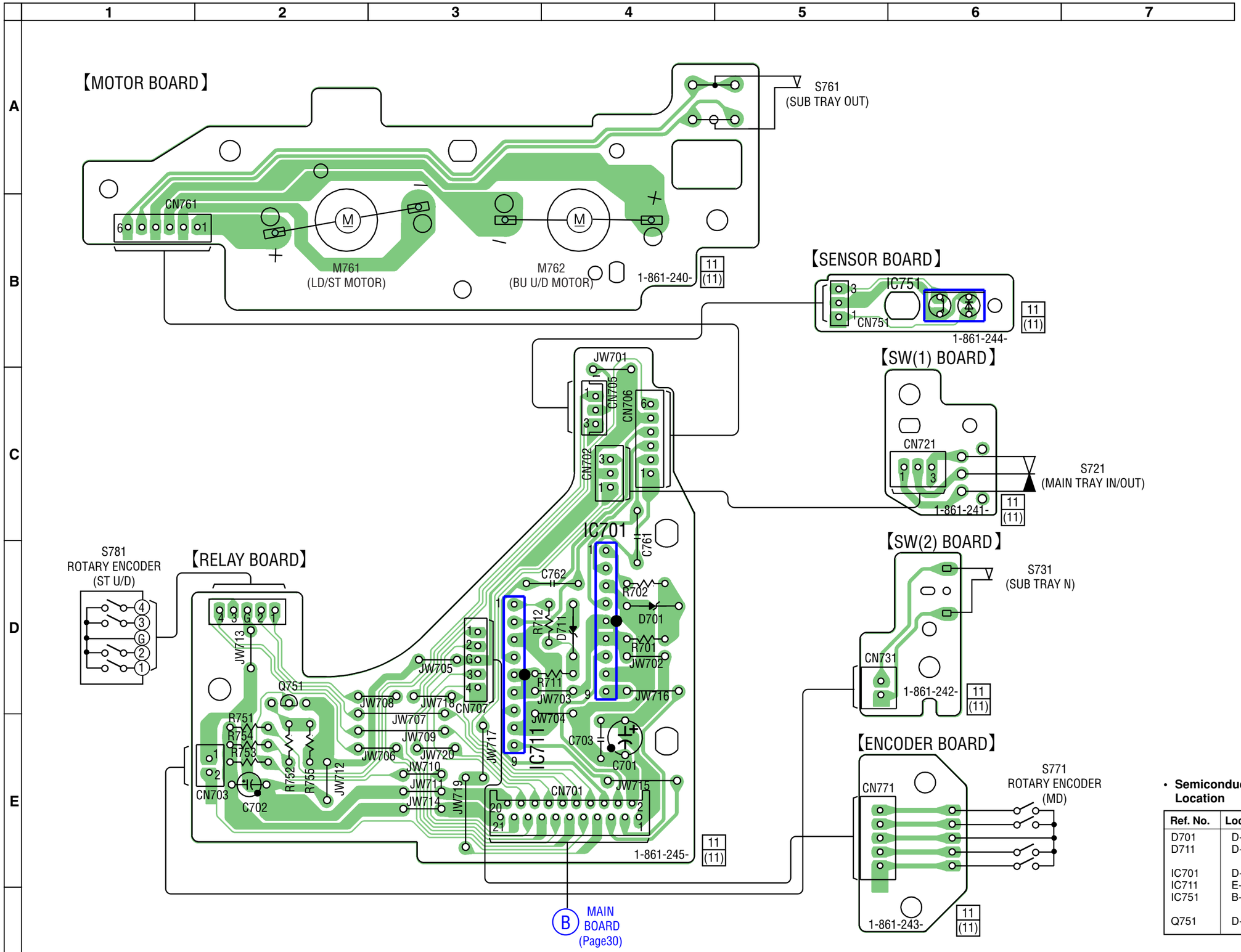
7-7. SCHEMATIC DIAGRAM – BD BOARD –

• See page 41 for IC Pin Function Description.



7-8. PRINTED WIRING BOARD – CD MECHANISM BOARD –

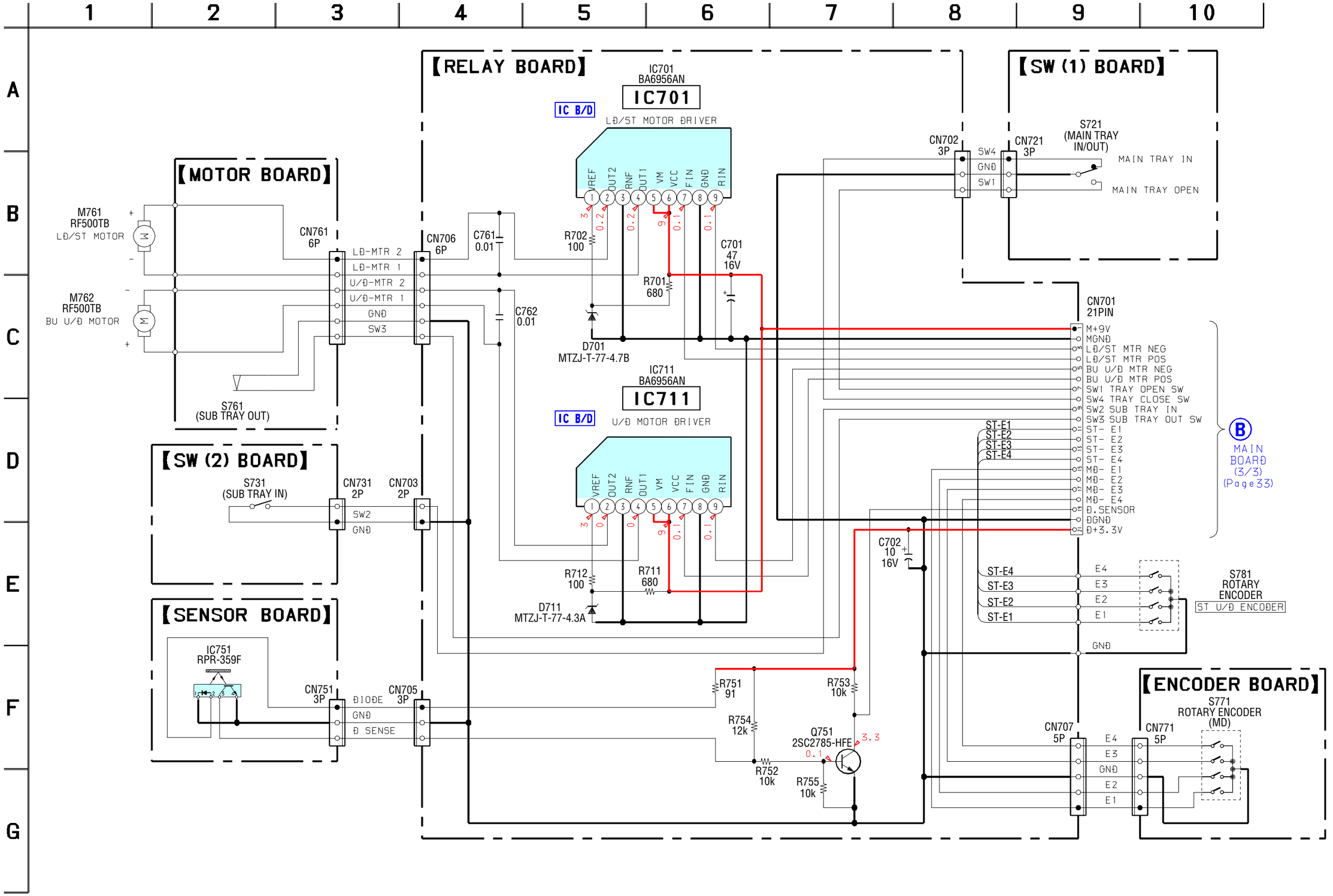
• See page 21 for Circuit Boards Location.



• **Semiconductor Location**

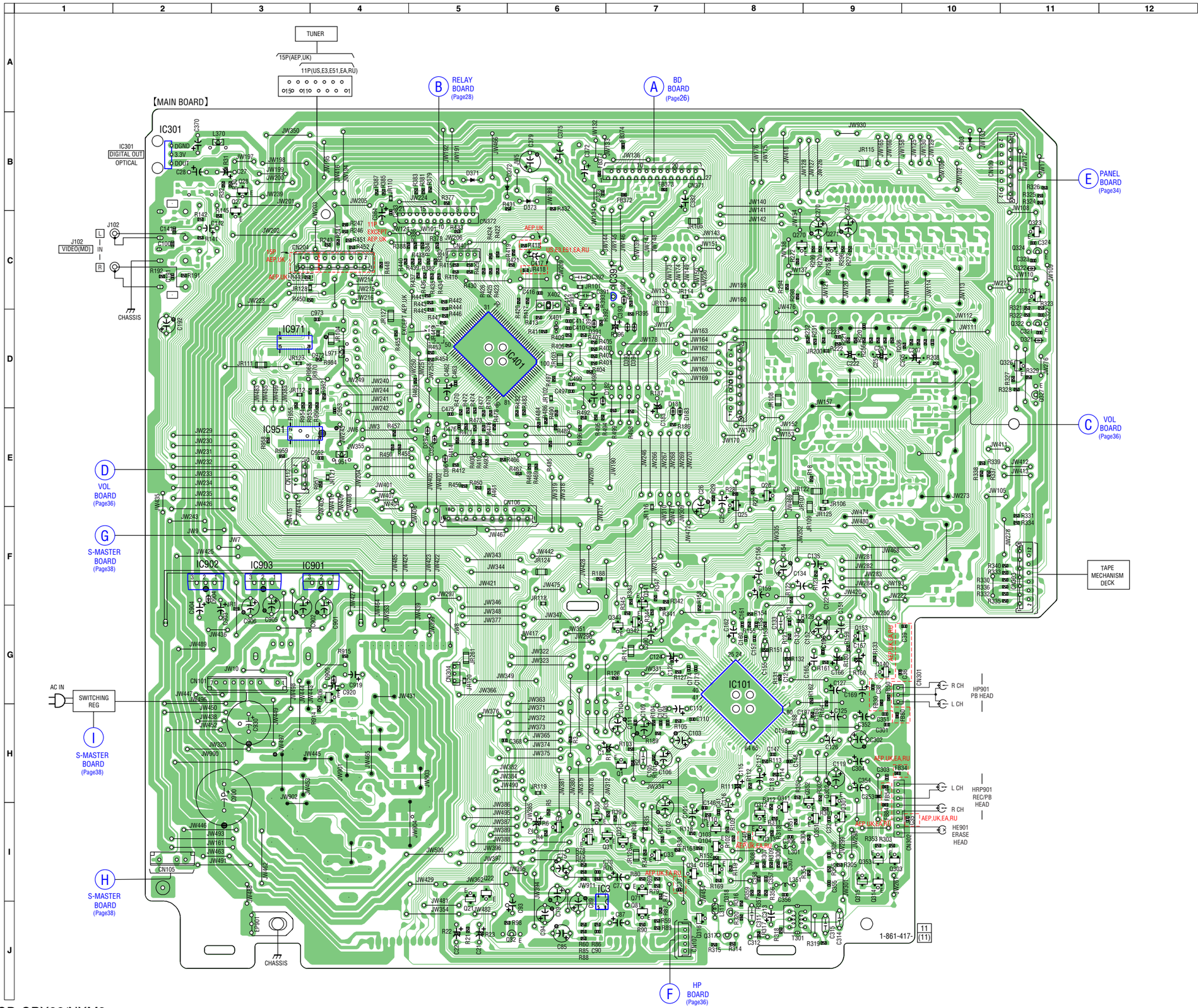
Ref. No.	Location
D701	D-4
D711	D-4
IC701	D-4
IC711	E-3
IC751	B-6
Q751	D-2

7-9. SCHEMATIC DIAGRAM – CD MECHANISM BOARD –



7-10. PRINTED WIRING BOARD – MAIN BOARD –

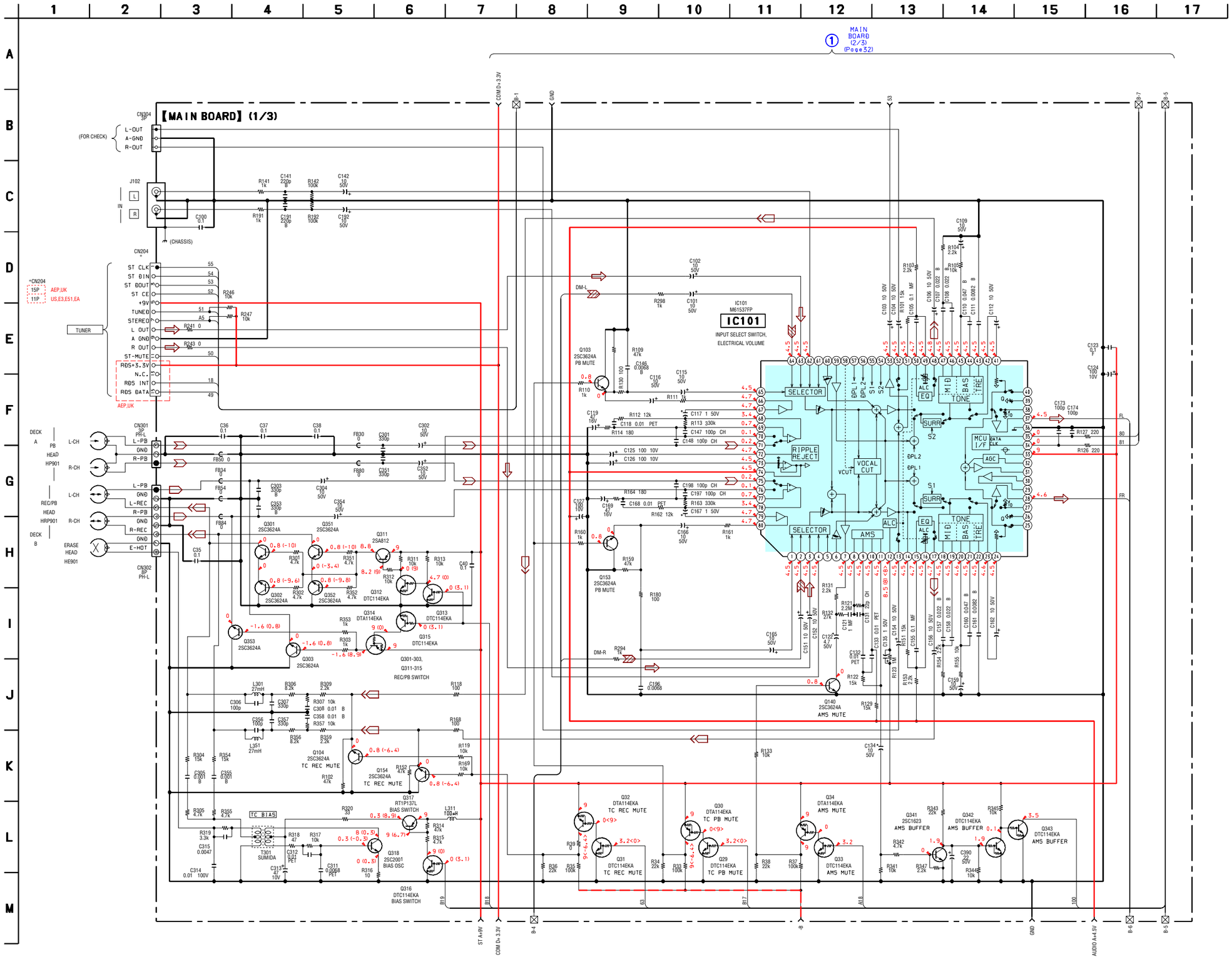
• See page 21 for Circuit Boards Location.



• **Semiconductor Location**

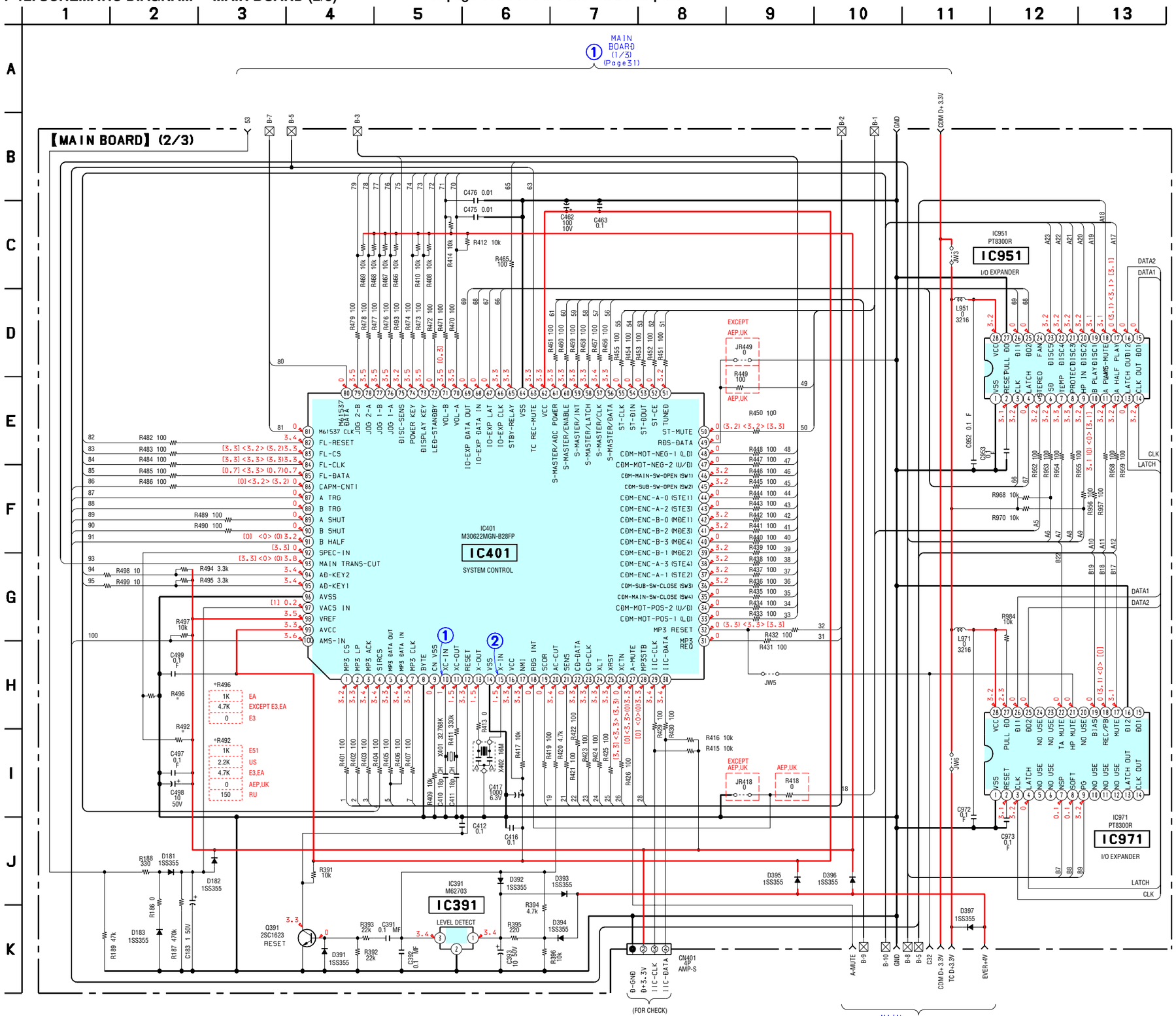
Ref. No.	Location	Ref. No.	Location
D181	E-7	Q31	I-6
D182	D-6	Q32	I-7
D183	E-7	Q33	I-7
D321	D-11	Q34	I-7
D322	C-11	Q71	I-7
D371	B-5	Q81	J-7
D372	B-5	Q82	J-6
D373	B-6	Q103	I-8
D391	D-6	Q104	I-8
D392	C-7	Q140	G-9
D393	D-7	Q153	G-9
D394	D-7	Q154	I-8
D395	E-5	Q270	C-8
D396	E-5	Q271	C-9
D397	E-5	Q301	I-9
D903	B-10	Q302	H-9
D904	F-2	Q303	I-9
D905	G-4	Q311	I-8
		Q312	I-8
IC3	I-6	Q313	I-8
IC101	G-8	Q314	I-9
IC301	B-2	Q315	I-9
IC391	C-7	Q316	J-7
IC401	D-6	Q317	J-8
IC901	F-4	Q318	J-8
IC902	F-2	Q321	C-11
IC903	F-3	Q322	D-11
IC951	E-3	Q323	C-11
IC971	D-3	Q324	C-11
		Q326	D-11
Q1	H-7	Q327	D-11
Q2	I-6	Q341	F-7
Q21	I-5	Q342	G-7
Q22	I-5	Q343	G-7
Q25	E-8	Q351	I-9
Q26	E-8	Q352	H-9
Q27	B-3	Q353	I-9
Q28	B-3	Q391	D-6
Q29	I-6	Q906	G-4
Q30	I-6		

7-11. SCHEMATIC DIAGRAM – MAIN BOARD (1/3) –

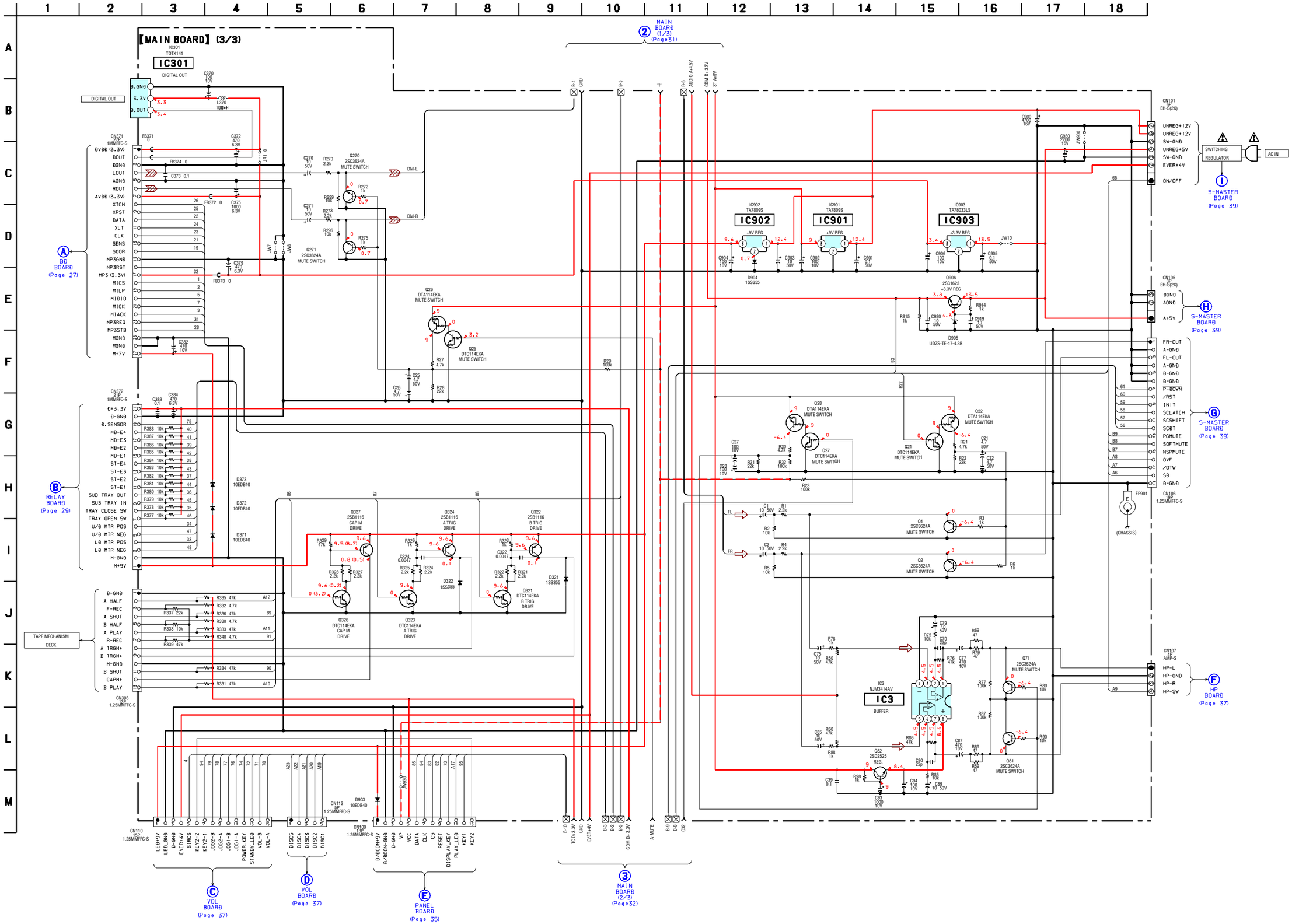


7-12. SCHEMATIC DIAGRAM – MAIN BOARD (2/3) –

• See page 44 for IC Pin Function Description.

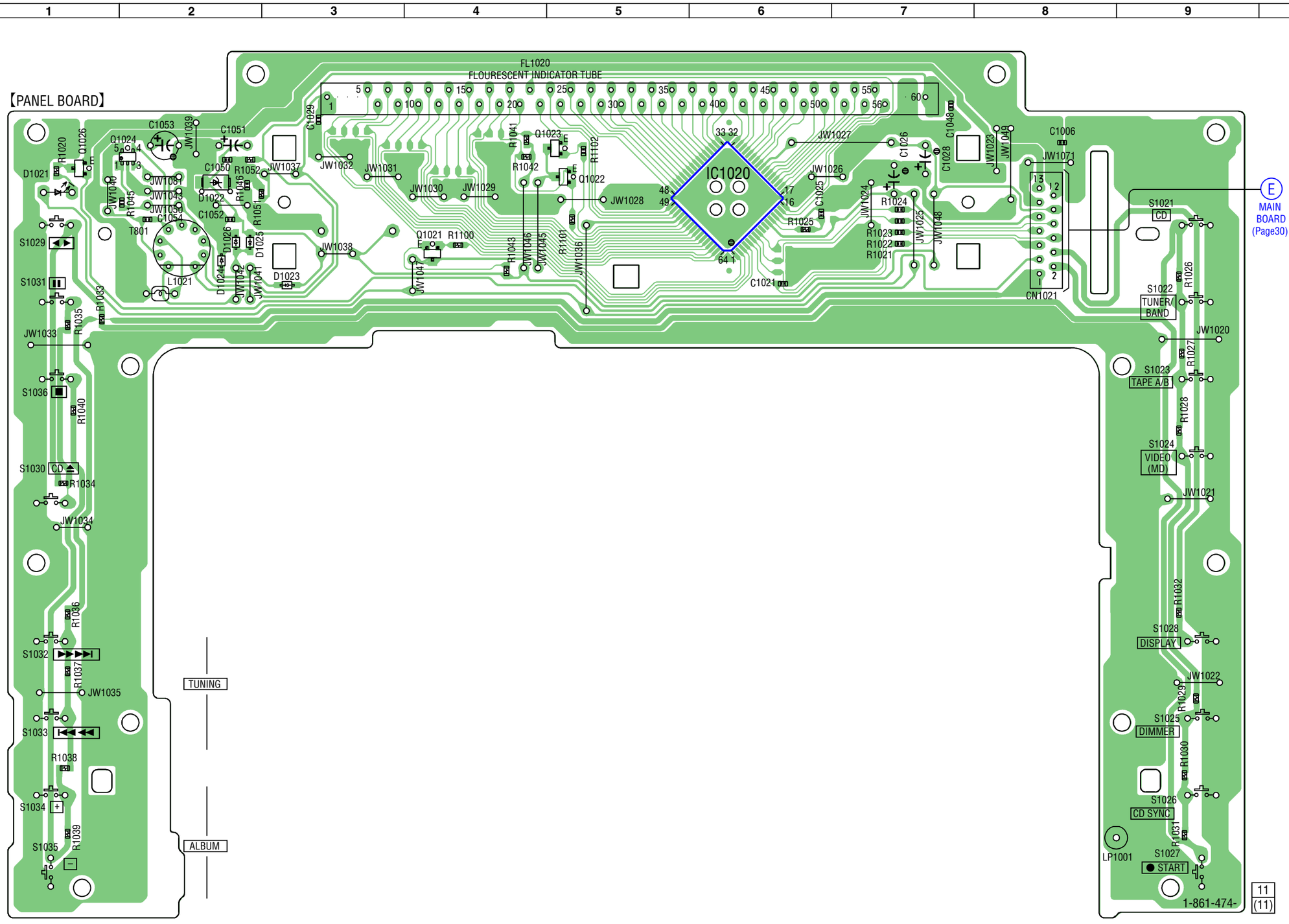


7-13. SCHEMATIC DIAGRAM – MAIN BOARD (3/3)–



7-14. PRINTED WIRING BOARD – PANEL BOARD –

• See page 21 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location
D1021	B-1
D1022	B-2
D1023	B-3
D1024	B-2
D1025	B-2
D1026	B-2
IC1020	B-6
Q1021	B-4
Q1022	B-5
Q1023	A-5
Q1024	A-2
Q1026	B-1

7-15. SCHEMATIC DIAGRAM – PANEL BOARD –

【PANEL BOARD】

FL1020
LIQUID CRYSTAL DISPLAY

IC1020
M66005
-0131AHPRBOT
DISPLAY CONTROL
/KEY CONTROL

Q1024
SWITCHING
REGULATOR

T801
DC-DC CONVERTER

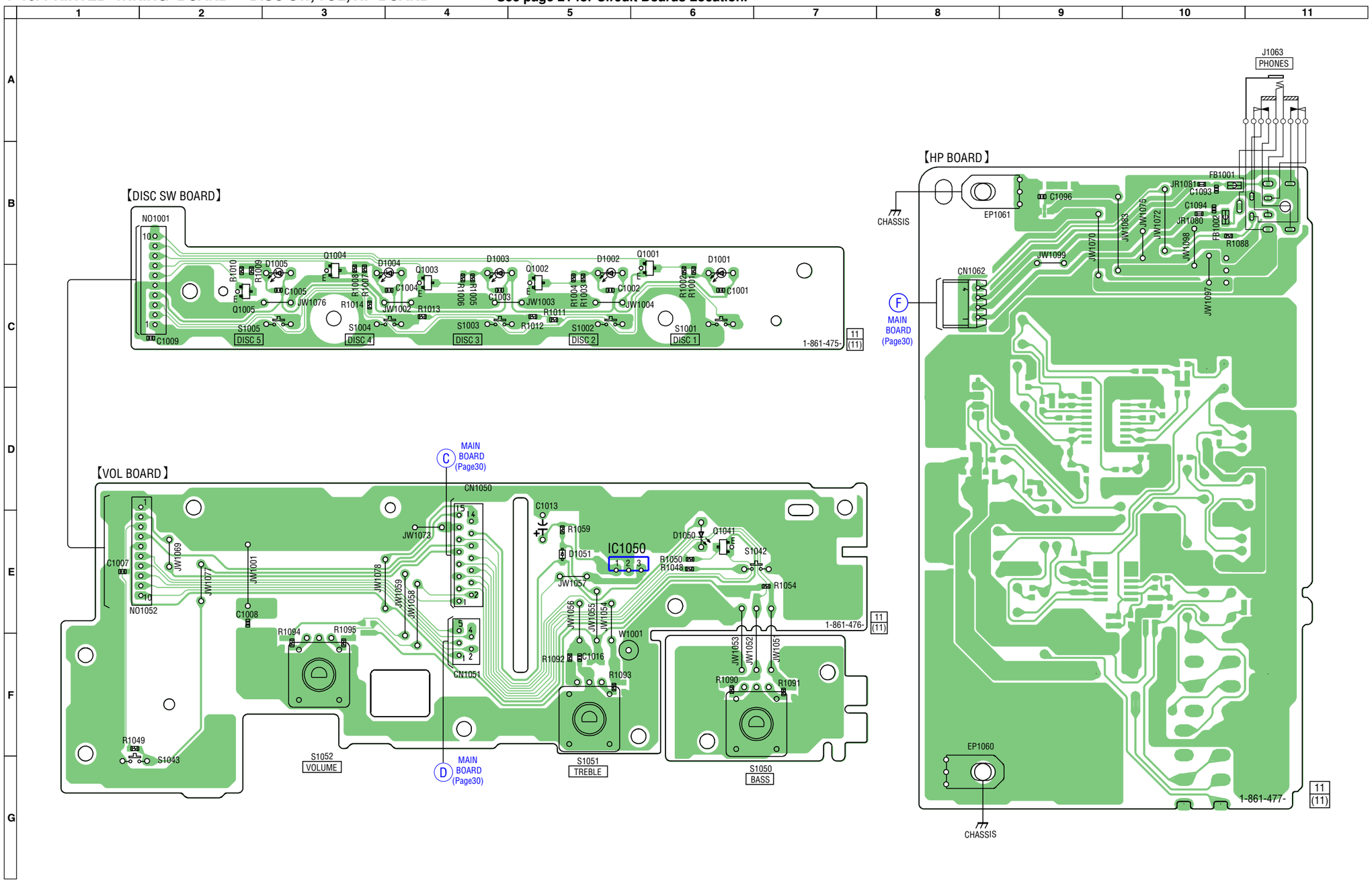
GRID
DRIVE
Q1021-1023

CN1021
13P

E MAIN BOARD (3/3) (Page33)

7-16. PRINTED WIRING BOARD – DISC SW, VOL, HP BOARD –

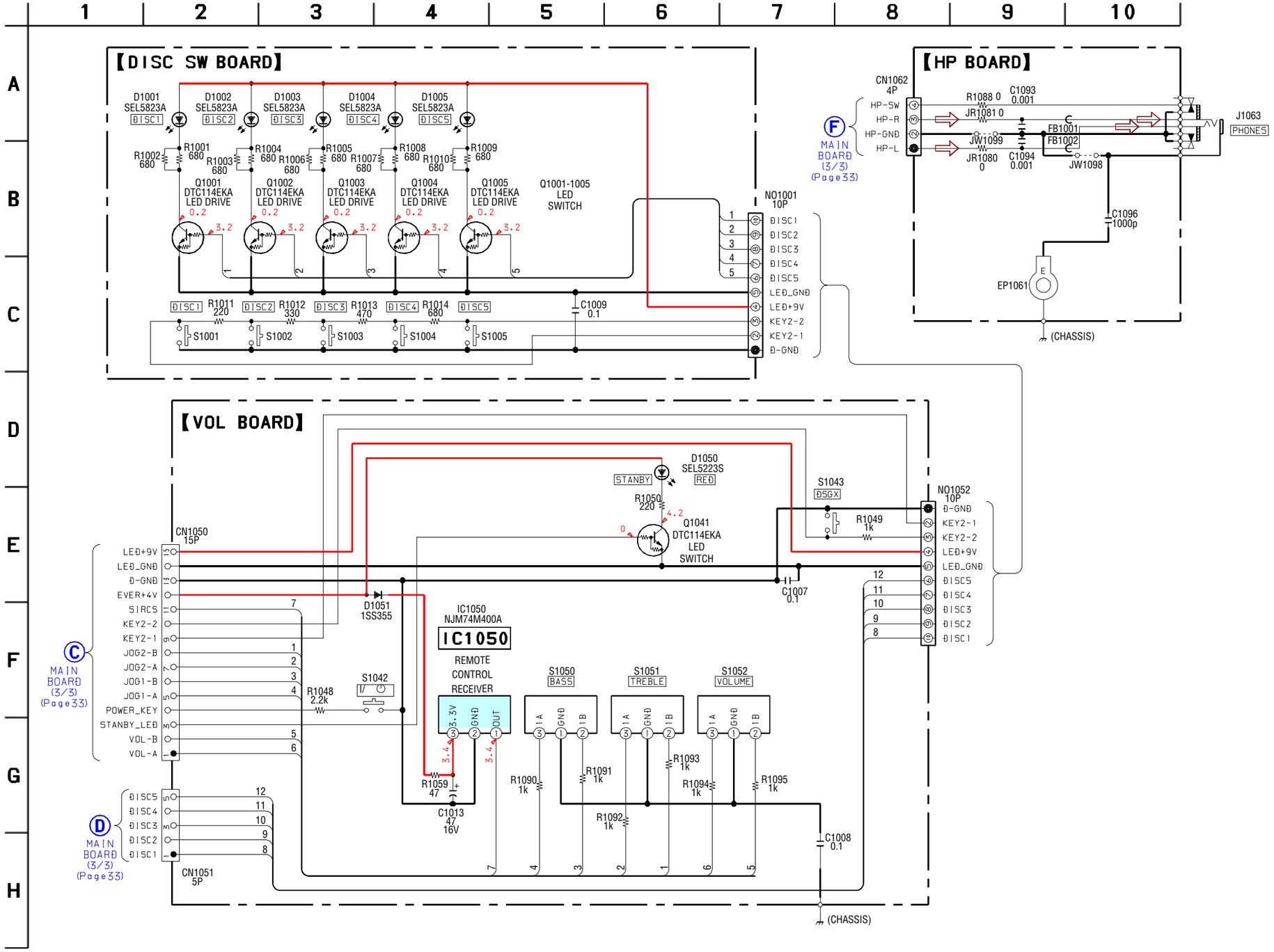
• See page 21 for Circuit Boards Location.



- **Semiconductor Location**

Ref. No.	Location
D1001	C-6
D1002	C-5
D1003	C-4
D1004	C-4
D1005	C-3
D1050	E-6
D1051	E-5
IC1050	E-5
Q1001	B-6
Q1002	C-5
Q1003	C-4
Q1004	C-3
Q1005	C-2
Q1041	E-6

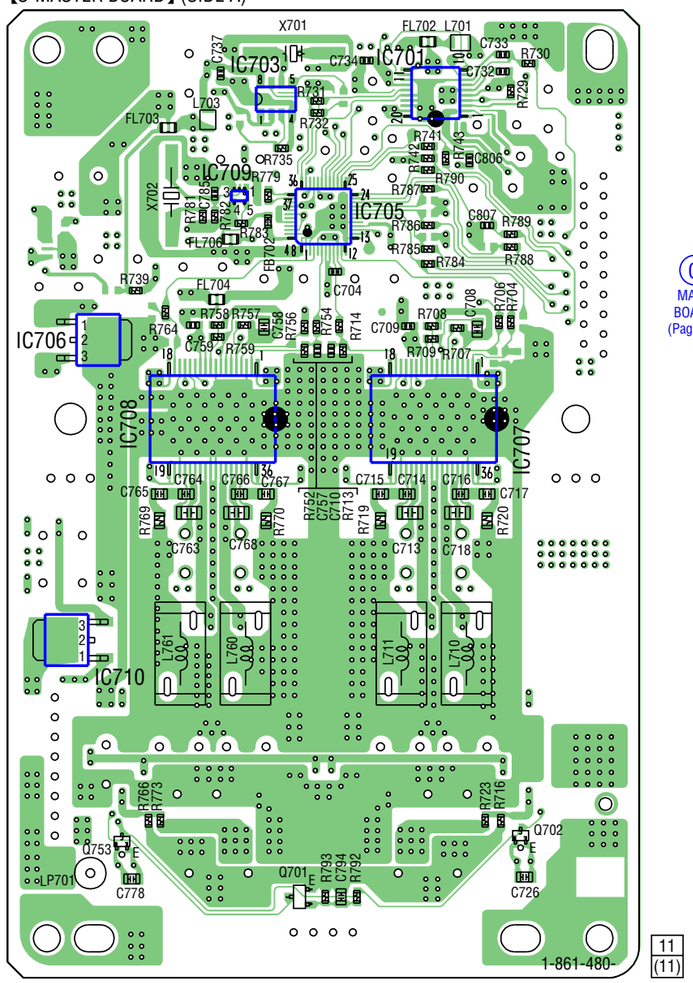
7-17. SCHEMATIC DIAGRAM – DISC SW, VOL, HP BOARD –



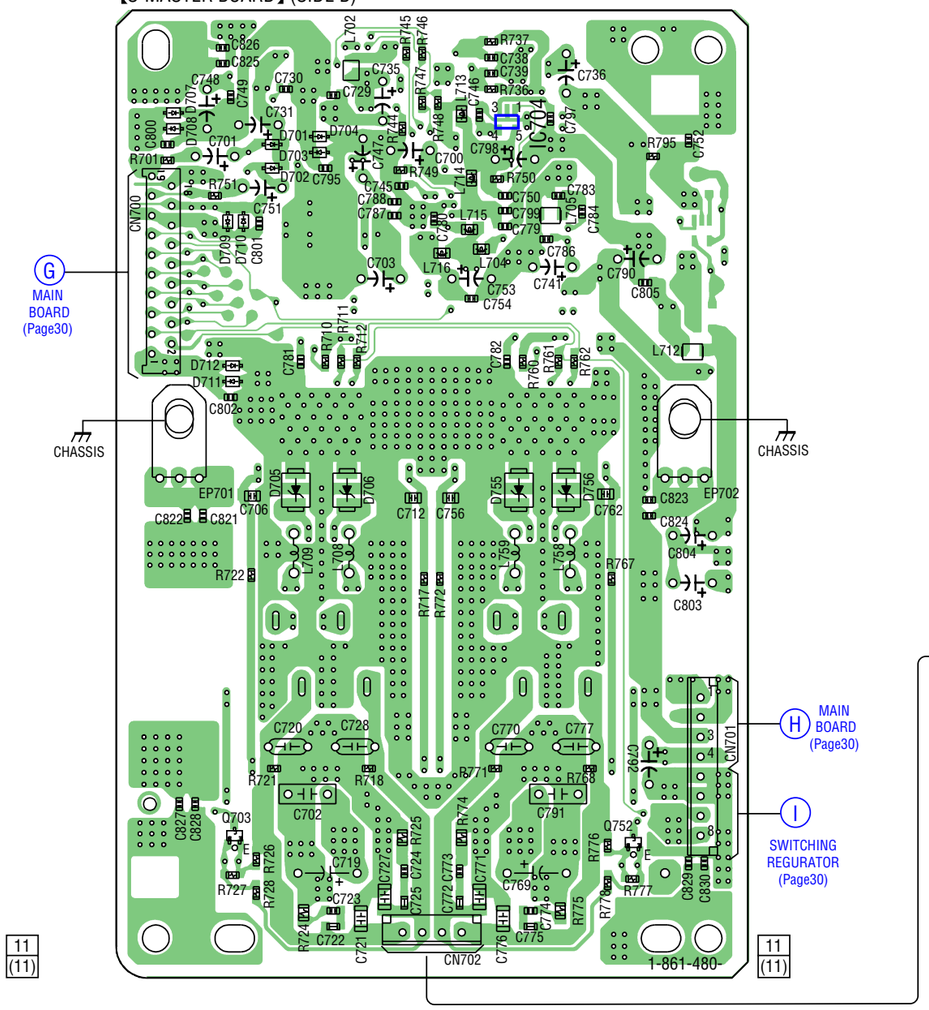
7-18. PRINTED WIRING BOARD – S-MASTER BOARD –

• See page 21 for Circuit Boards Location.

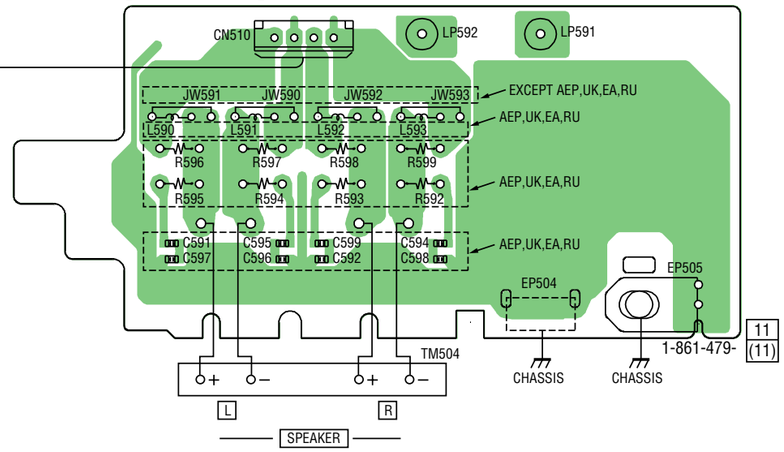
【S-MASTER BOARD】(SIDE A)



【S-MASTER BOARD】(SIDE B)



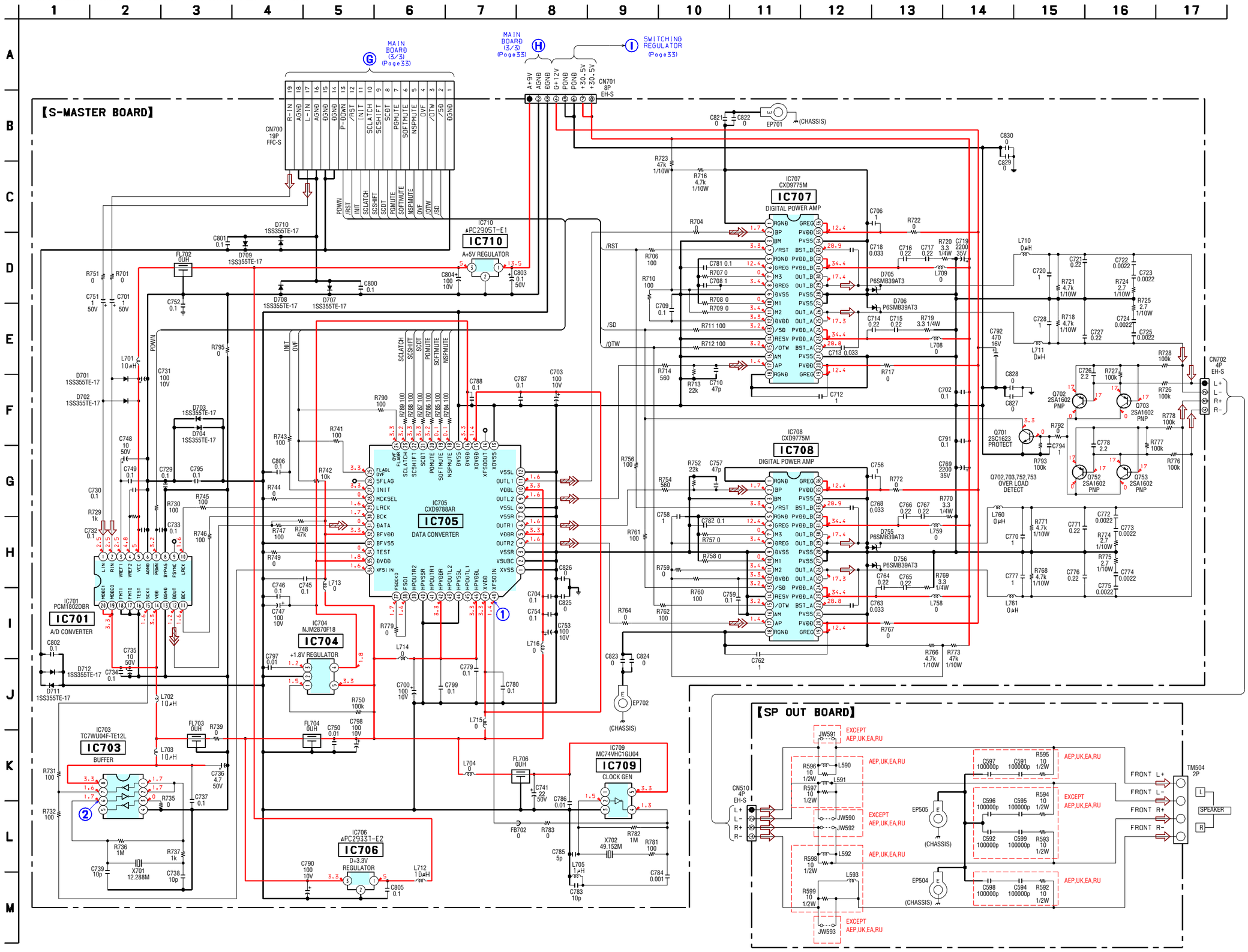
【SP OUT BOARD】



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D701	A-5	IC701	A-3
D702	B-5	IC703	A-2
D703	B-5	IC704	A-6
D704	A-5	IC705	B-2
D705	C-5	IC706	B-1
D706	C-6	IC707	C-3
D707	A-5	IC708	C-1
D708	A-5	IC709	B-2
D709	B-5	IC710	D-1
D710	B-5		
D711	C-5	Q701	E-2
D712	C-5	Q702	E-3
D755	C-6	Q703	E-5
D756	C-7	Q752	E-7
		Q753	E-1

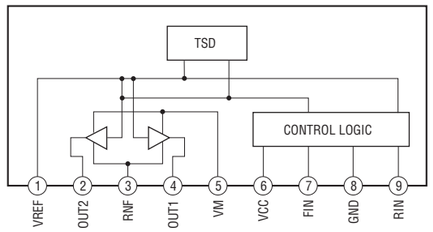
7-19. SCHEMATIC DIAGRAM – S-MASTER BOARD –



7-20. IC Block Diagram

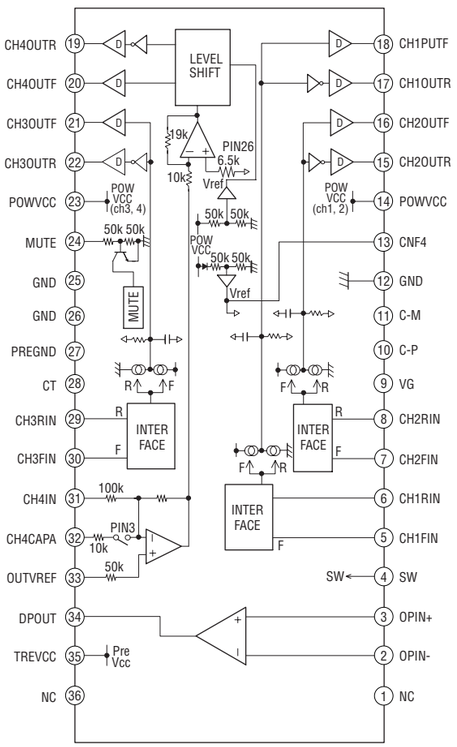
– RELAY Board –

IC701, 711 BA6956AN



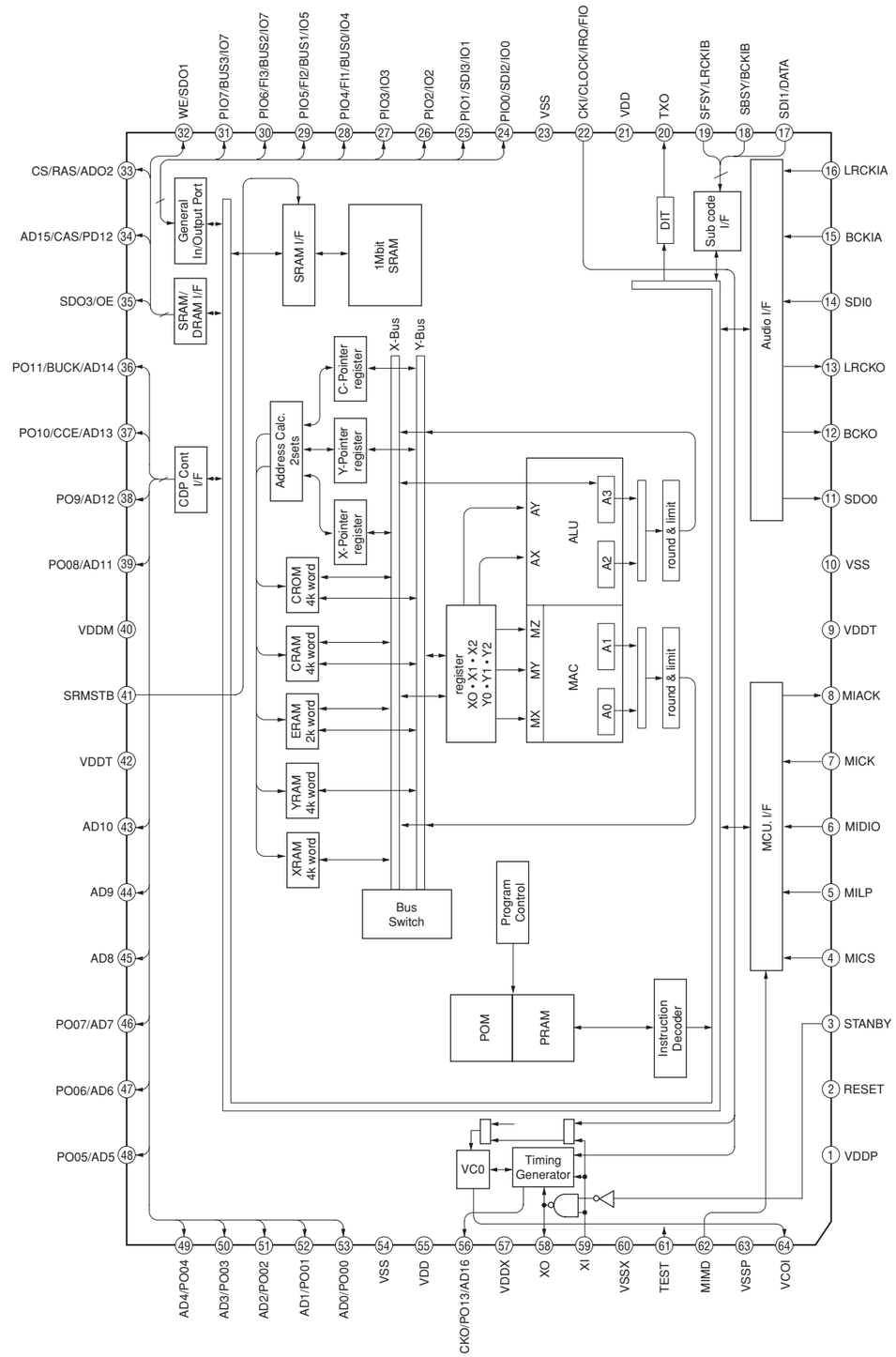
– BD Board –

IC251 BA5947FM



– BD Board –

IC301 TC94A34FG-002



7-21. IC Pin Function Descriptions

• IC101 CXD3059AR (RF AMP) (BD BOARD)

Pin No.	Pin Name	I/O	Description
1	MIRR	I/O	Mirror signal input/output(Not used)
2	DFCT	I/O	Defect signal input/output (Not used)
3	FOK	I/O	Focus OK signal input/output (Not used)
4	VSS	—	Internal digital ground
5	LOCK	I/O	Not used
6	MDP	O	Spindle motor servo control output
7	SSTP	I	Disk innermost detection signal input
8	IOVSS1	—	I/O digital ground
9	SFDR	O	Sled drive output
10	SFDR	O	Sled drive output
11	TFDR	O	Tracking drive output
12	TRDR	O	Tracking drive output
13	FFDR	O	Focus drive output
14	FFDR	O	Focus drive output
15	IOVDD1	—	I/O digital power supply
16	AVDD0	—	Analog power supply
17	AVSS0	—	Analog ground
18	NC	—	Not used
19	E	I	E signal input
20	F	I	F signal input
21	TEI	I	Tracking error signal input
22	TEO	O	Tracking error signal output
23	FEI	I	Focus error signal input
24	FEO	O	Focus error signal output
25	VC	I/O	Center voltage output from RF amplifier block
26	A	I	A signal input
27	B	I	B signal input
28	C	I	C signal input
29	D	I	D signal input A
30	NC	—	Not used
31	AVDD4	—	Analog power supply
32	RFDCO	O	RFDC signal output (Not used)
33	PDSENS	I	Reference voltage pin
34	AC_SUM	O	RFAC summing amplifier output
35	EQ_IN	I	Equalizer circuit input
36	LD	O	APC output
37	PD	I	APC input
38	NC	—	Not used
39	RFC	I	Equalizer cut-off frequency adjustment pin
40	AVSS4	—	Analog ground
41	RFACO	O	RFAC signal output
42	RFACI	I	RFAC signal input or EFM signal input
43	AVDD3	—	Analog power supply
44	BIAS	I	Asymmetry circuit constant current input
45	ASYI	I	Asymmetry comparator voltage input
46	ASYO	O	EFM full-swing output
47	VPCO	O	Not used
48	VCTL	I	Wide-band EFM PLL VCO2 control voltage input

Pin No.	Pin Name	I/O	Description
49	AVSS3	—	Analog ground
50	CLTV	I	Multiplier VCO1 control voltage input
51	FILO	O	Master PLL (slave = digital PLL) filter output
52	FILI	I	Master PLL filter input
53	PCO	O	Master PLL charge pump output
54	AVDD5	—	Analog power supply
55	DDVROUT	O	DC/DC converter output
56	DDVRSEN	I	DC/DC converter output voltage monitor input
57	AVSS5	—	Analog ground
58	DDCR	I	DC/DC converter reset input
59	NC	—	Not used
60	BCKI	I	D/A interface bit clock input
61	PCMDI	I	D/A interface serial data input (2's COMP, MSB first)
62	LRCKl	I	D/A interface LR clock input
63	LRCK	O	D/A interface LR clock output f = Fs
64	VSS	—	Internal digital ground
65	PCMD	O	D/A interface serial data output (2's COMP, MSB first)
66	BCK	O	D/A interface bit clock output
67	VDD	—	Internal digital power supply
68	EMPH	O	High when the playback disc has emphasis, low it has not
69	EMPHI	I	High when de-emphasis is ON, low when input OFF
70	IOVDD2	—	I/O digital power supply
71	DOUT	O	Digital Out output
72	TEST	I	Test pin Normally ground
73	TES1	I	Test pin Normally ground
74	IOVss2	—	I/O digital ground
75	NC	—	Not used
76	XVSS	—	Master clock ground
77	XTAO	O	Crystal oscillation circuit output
78	XTAI	I	Crystal oscillation circuit input
79	XVDD	—	Master clock power supply
80	AVDD1	—	Analog power supply
81	AOUT1	O	Lch analog output
82	VREFL	O	Lch reference voltage
83	AVSS1	—	Analog ground
84	AVSS2	—	Analog ground
85	VREFR	O	Rch reference voltage
86	AOUT2	O	Rch analog output
87	AVDD2	—	Analog power supply
88	NC	—	Not used
89	IOVDD0	—	I/O digital power supply
90	RMUT	O	Rch "0" detection flag (Not used)
91	LMUT	O	Lch "0" detection flag (Not used)
92	NC	—	Not used
93	XTSL	I	Crystal selection input (Not used)
94	IOVSS0	—	I/O digital ground
95	XTACN	I	Oscillation circuit control Self-oscillation when high, oscillation stop when low
96	SQSO	O	Subcode Q 80-bit and PCM peak and level data output (Not used)
97	SQCK	I	SQSO readout clock input

Pin No.	Pin Name	I/O	Description
98	SBSO	O	Subcode P to W serial output (Not used)
99	EXCK	I	SBSO readout clock input (Not used)
100	XRST	I	System reset input
101	SYSM	I	Mute input
102	D ATA	I	Serial data input from CPU
103	VSS	—	Internal digital ground
104	XLAT	I	Latch input from CPU
105	CLOCK	I	Serial data transfer clock input from CPU
106	VDD	—	Sled drive output Internal digital power supply Tracking drive output
107	SENS	O	SENS output to CPU
108	SCLK	I	SENS serial data readout clock input
109	ATSK	I/O	Anti-shock input/output (Not used)
110	WFCK	O	WFCK output (Not used)
111	XUGF	O	XUGF output (Not used)
112	XPCK	O	XPCK output (Not used)
113	GFS	O	GFS output (Not used)
114	C2PO	O	C2PO output (Not used)
115	SCOR	O	High output when the subcode sync, S0 or S1, is detected
116	VDD	—	Internal digital power supply
117	C4M	O	4 2336MHz output (Not used)
118	WDCK	O	Word clock output f = 2Fs (Not used)
119	COUT	I/O	Track number count signal input/output (Not used)
120	NC	—	Not used

• IC401 M30622MGN-B28FPUO (SYSTEM CONTROL) (MAIN Board)

Pin No.	Pin Name	I/O	Description
1	MP3 CS	O	Chip select signal to CD Digital Processor
2	MP3 LP	O	Latch pulse output to CD Digital Processor and Motor signal output
3	MP3 ACK	I	ACK input from CD Digital Processor and Motor signal input
4	SIRCS	I	Remote commander signal input
5	MP3 DATA OUT	O	Serial data output to the MP3 circuit
6	MP3 DATA IN	I	Serial data input from the MP3 circuit
7	MP3 CLK	O	Serial clock output to the MP3 circuit
8	BYTE	I	External data bus width select input (connected to ground)
9	CN VSS	I	Processor modes switch
10	Xcin	I	Sub clock input (32.768kHz)
11	Xcout	O	Sub clock output (32.768kHz)
12	RESET	I	System reset input
13	Xout	O	Main system clock output (16MHz)
14	Vss	–	Ground
15	Xin	I	Main system clock input (16MHz)
16	Vcc	–	Power supply
17	NMI	I	Non-maskable interrupt input
18	RDS-INT	I	Sirial data taransfer clock signal input
19	SCOR	I	CD Q-DATA request
20	AC-CUT	I	AC cut-off detection signal input
21	SENS	I	Internal status(SENSE) signal input from CXD3059AR
22	CD-DATA	O	Serial data output
23	CD-CLK	O	Serial data transfer clock signal output
24	XLT	O	Serial data latch pulse output
25	XRST	O	Reset signal output to the CD mechanism
26	XCTN	O	XCTN signal output (for Tuner noise reduction)
27	A-MUTE	O	Audio muting on/off control signal output
28	MP3-STANDBY	O	Standby signal output to the MP3 circuit
29	IIC_CLK	I/O	Communication data reading clock signal input or transfer clock siganal output
30	IIC_DATA	I/O	Communication data bus with CD mechanism and Fluorescent indicater
31	MP3 REQ	I	REQ signal input from MP3 circuit
32	MP3 RESET	O	RESET signal output to the MP3 circuit
33	CDM-MOT-POS-1	O	Motor drive signal output (L/D)
34	CDM-MOT-POS-2	O	Motor drive signal output (U/D)
35	CDM-MAIN-SW-CLS	I	Detection signal input from disc tray close detect main switch
36	CDM-SUB-SW-OPN	I	Detection signal input from disc tray open detect sub switch
37	CDM-ENC-A-1	I	Detection signal input from the disc tray address detect rotary encoder
38	CDM-ENC-A-3	I	Detection signal input from the disc tray address detect rotary encoder
39	CDM-ENC-B-1	I	Detection signal input from the disc tray address detect rotary encoder
40	CDM-ENC-B-3	I	Detection signal input from the disc tray address detect rotary encoder
41	CDM-ENC-B-2	I	Detection signal input from the disc tray address detect rotary encoder
42	CDM-ENC-B-0	I	Detection signal input from the disc tray address detect rotary encoder
43	CDM-ENC-A-2	I	Detection signal input from the disc tray address detect rotary encoder
44	CDM-ENC-A-0	I	Detection signal input from the disc tray address detect rotary encoder
45	CDM-SUB-SW-CLS	I	Detection signal input from disc tray close detect sub switch
46	CDM-MAIN-SW-OPN	I	Detection signal input from disc tray open detect main switch
47	CDM-MOT-NEG-2	O	Motor drive signal output (U/D)
48	CDM-MOT-NEG-1	O	Motor drive signal output (L/D)
49	RDS-DATA	I	RDS data input
50	ST-MUTE	O	Tuner muting control signal output to tuner unit

Pin No.	Pin Name	I/O	Description
51	TUNED IN	I	Tuning detecton signal input from tuner unit
52	ST-CE	O	PLL chip enable signal output to tuner unit
53	ST-DOUT	O	PLL serial data output to tuner unit
54	ST-DIN	I	PLL serial data input from tuner unit
55	ST-CLK	O	PLL serial tansfer clock signal output to tuner unit
56	SM-DATA	O	Serial data output to the S-Master circuit
57	SM-CLK	O	Serial data transfer outout to the S-Master circuit
58	SM-LAT	O	Serial data latch pulse output to the S-Master circuit
59	SM-INT	O	Initial signal output to the S-Master (Power reset)
60	SM-ENB	O	ENABLE signal output to the S-Master
61	SM-ADC-POWR	O	ADC signal to the S-Master
62	VCC	–	Power supply
63	TC-REC-MUTE	O	Recording muting on/off selection signal output
64	VSS	–	Ground
65	STBY-RELAY	O	Main power on/off control signal output
66	IO-EXP:CLK	O	Serial data transfer output to the I/O expander circuit
67	IO-EXP:LAT	O	Serial data latch pulse output to the I/O expander circuit
68	IO-EXP DATA IN	I	Serial data input from the I/O expander circuit
69	IO-EXP DATA OUT	O	Serial data output to the I/O expander circuit
70	VOL-A	I	Jog dial pulse input from the rotary encoder (Volume)
71	VOL-B	I	Jog dial pulse input from the rotary encoder (Volume)
72	LED:STANDBY	O	Standby signal output to the LED driver
73	DISPLAY KEY	I	Display key input signal
74	POWER KEY	I	Power key input signal
75	DISC-SENS	I	Disc status detection signal input
76	JOG 1-A	I	Jog dial pulse input from the rotary encoder (Bass)
77	JOG 1-B	I	Jog dial pulse input from the rotary encoder (Bass)
78	JOG 2-A	I	Jog dial pulse input from the rotary encoder (Treble)
79	JOG 2-B	I	Jog dial pulse input from the rotary encoder (Treble)
80	AMP-DATA	O	Serial data output to the Front Amp circuit
81	AMP-CLK	O	Serial clock output to the Front Amp circuit
82	FL-RESET	O	Reset signal output to the FL indicator tubu circuit
83	FL-CS	O	Chip select signal output to the FL indicator tubu circuit
84	FL-CLK	O	Serial clock output to the FL indicator tubu circuit
85	FL-DATA	O	Serial data output to the FL indicator tubu circuit
86	CAMP-CNT1	O	Capstan motor drive signal output
87	A TRG	O	Deck-A side trigger plunger drive signal output
88	B TRG	O	Deck-B side trigger plunger drive signal output
89	A SHUT	I	Shut off detection signal input from the deck-A side reel pulse detector
90	B SHUT	I	Shut off detection signal input from the deck-B side reel pulse detector
91	B HALF	I	Detection input from the deck-B half detect switch
92	SPEC-IN	I	Setting terminal for the version
93	MAIN-TRANS-CUT	I	Main transformer cut detect signal input
94	AD-KEY 2	I	AD key 2 signal input
95	AD-KEY 1	I	AD key 1 signal input
96	AVSS	–	Ground
97	VACS IN	I	VACS signal input
98	VREF	I	Reference voltage input
99	AVCC	–	Analog power supply
100	AMS-IN	I	Automatic music senser signal input

• **IC705 CXD9788AR (DATA CONTOL) (S-MASTER Board)**

Pin No.	Pin Name	I/O	Description
1	XVss	–	Ground
2	Vsubc	–	Ground
3	VssR	–	Ground
4	OUTR2	O	PWM2 output for R-ch power stage.
5	VddR	–	Power supply(+3.3v)
6	OUTR1	O	PWM1 output for R-ch power stage.
7	VssR	–	Ground
8	VssL	–	Ground
9	OUTL2	O	PWM2 output for L-ch power stage.
10	VddL	–	Power supply(+3.3v)
11	OUTL1	O	PWM1 output for R-ch power stage.
12	VssL	–	Ground
13	XOVss	–	Ground
14	XfsoOUT	O	Secondary master clock buffer output
15	XOVdd	–	Power supply(+3.3v)
16	DVdd	–	Power supply(power supply for digital section +1.8v)
17	DVss	–	Ground
18	NSPMUTEI	I	PWM duty50% mute and delta/sigma registor clear signal input
19	SoftMUTE	I	Soft mute signal input
20	PGMUTE	I	Mute signal input for PWM output data
21	SCDT	I	Serial control data input
22	SCSHIFT	I	Serial control shift clock input
23	SCLATCH	I	Serial control latch signal input
24	OVFFLAG	O	R-ch arithmetic section overflow detect flag output
25	OVFFLAG	O	L-ch arithmetic section overflow detect flag output
26	SFLAG	O	Anti-synchronize detect flag output
27	INIT	I	Initalise signal input (power reset)
28	MCKSEL	I	Secondary master clock select input
29	LRCK	I	Sampling clock input (correspond to CD/MD/DVDaudio etc)
30	BCK	I	Bit clock input(correspond to CD/MD/DVDaudio etc)
31	DATA	I	Audio data input(correspond to CD/MD/DVDaudio etc)
32	BFVdd	–	Power supply(+3.3v)
33	BFVss	–	Ground
34	TEST	I	Test terminal(normaly ground)
35	DVdd	–	Power supply(power supply for digital section +1.8v)
36	XFfsilN	I	Primary master clock input
37	FsoCKO	O	Secondary fso clock M-output
38	Fsol	I	Secondary fso clock input
39	HPOUTR2	O	Not used
40	HPVssR	–	Ground
41	HPOUTR1	O	Not used
42	HPVddR	–	Power supply(+3.3v)
43	HPOUTL2	O	Not used
44	HPVddL	–	Ground
45	HPOUT	O	Not used
46	HPVddL	–	Power supply(+3.3v)
47	XVdd	–	Power supply(+3.3v)
48	XfsoIN	I	Secondary master clock input(1024/512fso)

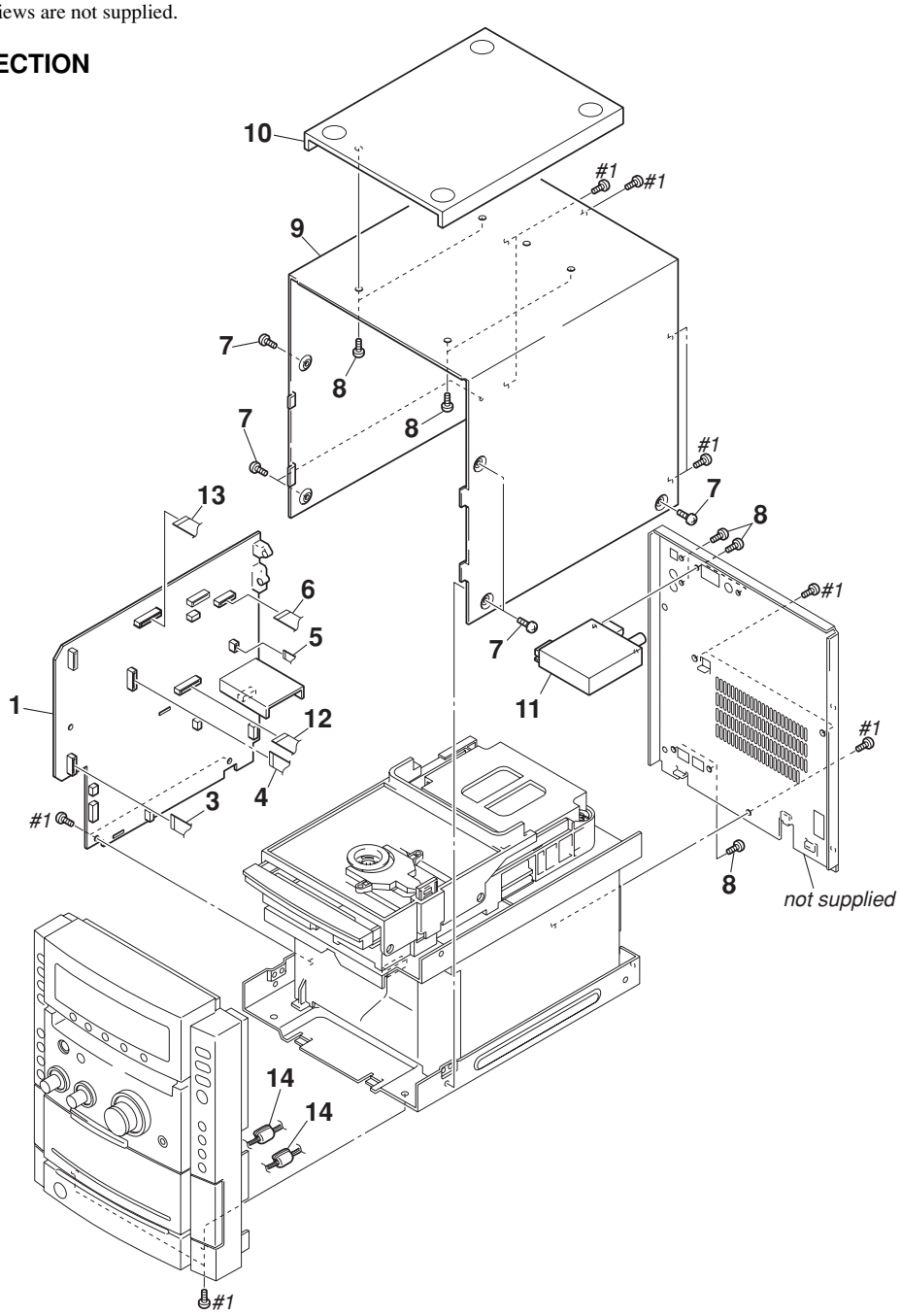
SECTION 8
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  E3 : 240V AC Area in E model
  E51 : Chilean and Peruvian model
  EA : Saudi Arabia model
  RU : Russian model

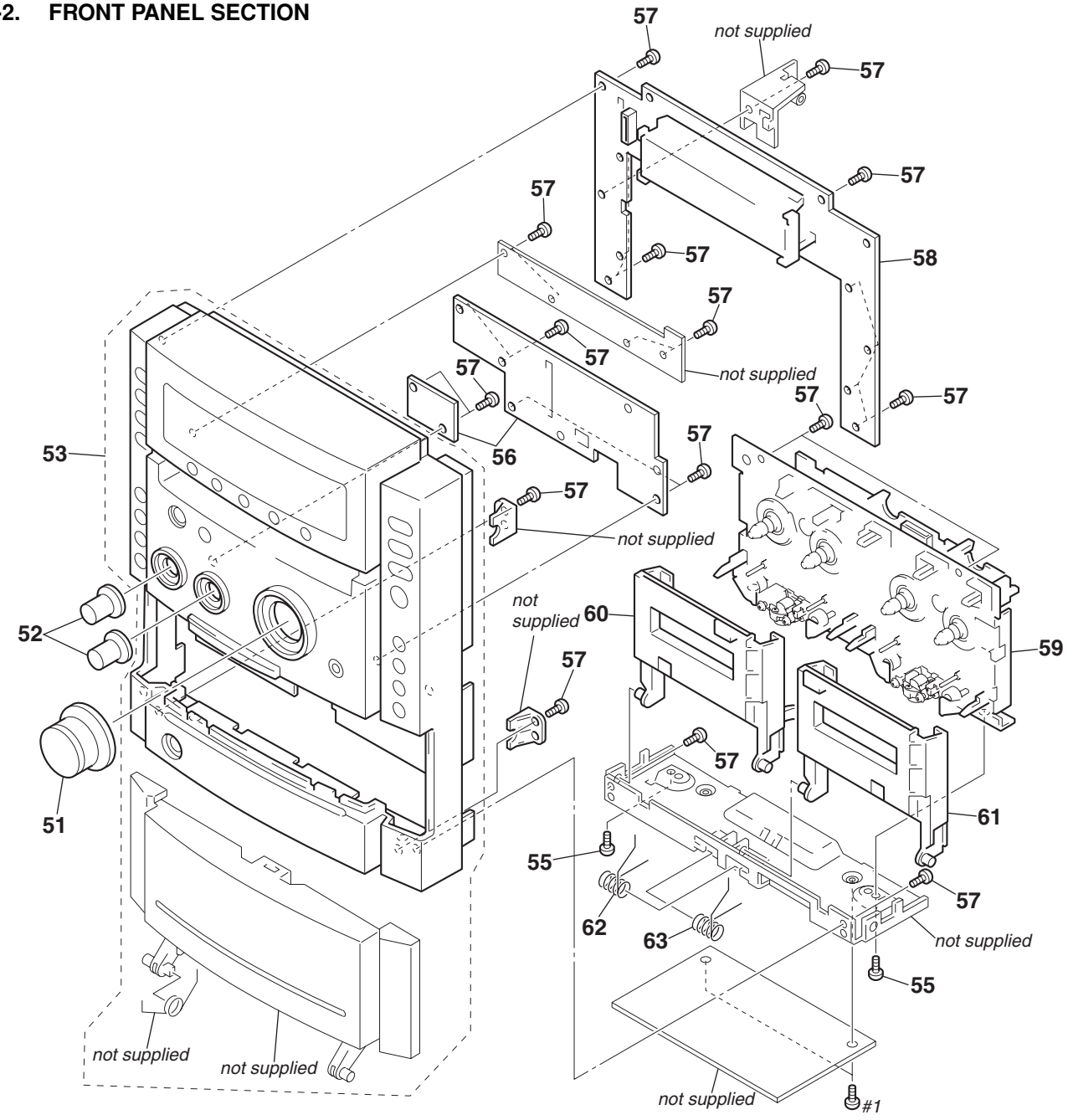
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

8-1. MAIN SECTION



Ref. No.	Part No.	Description	Remarks
1	A-1052-039-A	MAIN BOARD, COMPLETE (EA)	
1	A-4750-856-A	MAIN BOARD, COMPLETE (AEP, UK)	
1	A-4750-931-A	MAIN BOARD, COMPLETE (RU)	
1	A-4750-933-A	MAIN BOARD, COMPLETE (E3)	
1	A-4750-935-A	MAIN BOARD, COMPLETE (E51)	
1	A-4750-937-A	MAIN BOARD, COMPLETE (US)	
3	1-769-984-11	WIRE (FLAT TYPE) (13 CORE)	
4	1-765-332-11	WIRE (FLAT TYPE) (15 CORE)	
5	1-769-869-11	WIRE (FLAT TYPE) (5 CORE)	
6	1-769-939-11	WIRE (FLAT TYPE) (11 CORE) (EXCEPT AEP, UK)	
6	1-773-003-11	WIRE (FLAT TYPE) (15 CORE) (AEP, UK)	
7	3-363-099-22	SCREW (CASE 3 TP2)	
8	4-951-620-01	SCREW (2.6X8), +BVTP	
9	4-252-541-51	CASE	
10	4-252-538-01	PANEL, TOP	
11	1-693-603-31	TUNER (FM/AM) (E3, E51, EA)	
11	1-693-604-11	TUNER (FM/AM) (AEP, UK)	
11	1-693-623-31	TUNER (FM/AM) (US)	
11	1-693-654-11	TUNER (FM/AM) (RU)	
12	1-773-119-11	WIRE (FLAT TYPE) (19CORE)	
13	1-827-488-11	WIRE (FLAT TYPE) (27CORE)	
14	1-500-386-11	FILTER, CLAMP (FERRITE CORE)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 TT (B)	

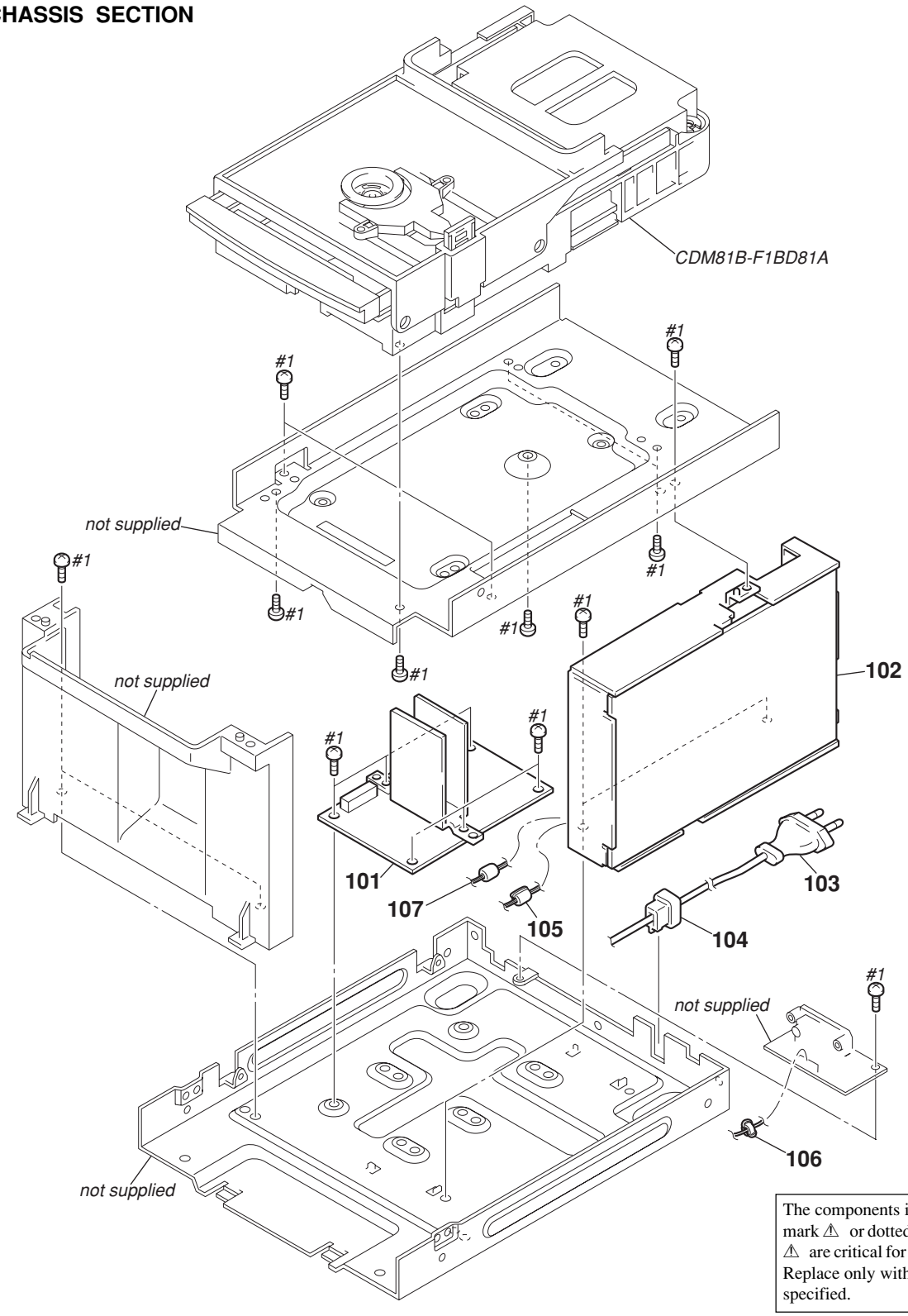
8-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
51	4-252-535-11	KNOB (VOL)	
52	4-252-536-01	KNOB (B/T)	
53	X-4956-194-1	PANEL ASSY (U) (CPX22), FRONT (US)	
53	X-4956-200-1	PANEL ASSY (CPX22), FRONT (AEP, UK)	
53	X-4956-262-1	PANEL ASSY, FRONT (E3, E51, EA)	
53	X-4956-333-1	PANEL ASSY, FRONT (RU)	
55	3-970-608-01	SUMITITE (B3), +BV	
56	A-4750-851-A	VOL BOARD, COMPLETE	
57	4-951-620-01	SCREW (2.6X8), +BVTP	

Ref. No.	Part No.	Description	Remarks
58	A-4750-849-A	FL COM BOARD, COMPLETE	
59	1-796-880-11	DECK, MECHANISM	
60	X-4956-197-1	HOLDER (A) (TC) ASSY	
61	X-4956-198-1	HOLDER (B) (TC) ASSY	
62	4-252-530-01	SPRING (HB)	
63	4-252-529-01	SPRING (HA)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

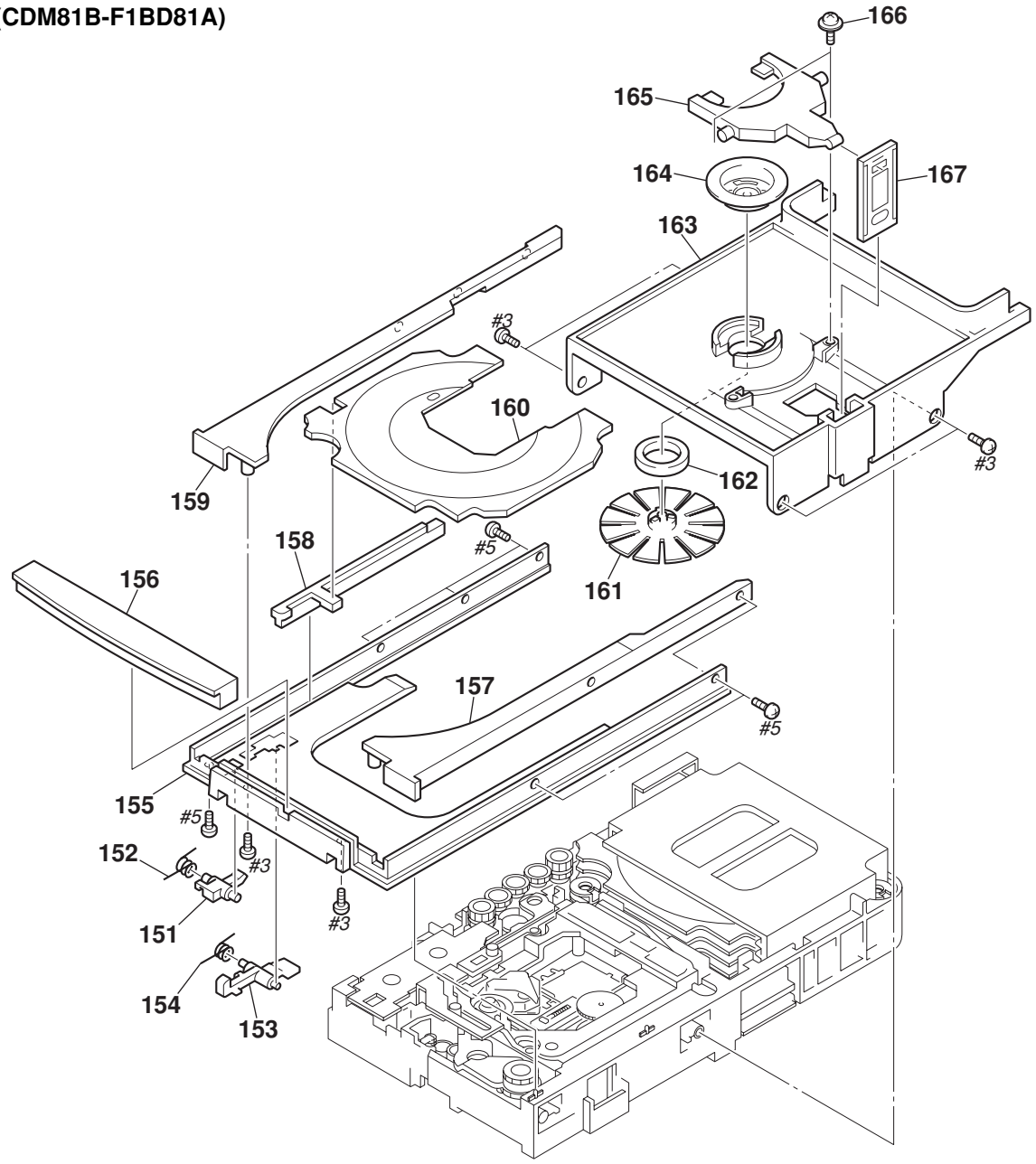
8-3. CHASSIS SECTION



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
101	A-4750-863-A	S-MASTER (A) BOARD, COMPLETE	
⚠102	1-468-813-11	REGULATOR, SWITCHING (AEP, UK, RU)	
⚠102	1-468-819-11	REGULATOR, SWITCHING (US)	
⚠102	1-468-821-11	REGULATOR, SWITCHING (E3, E51, EA)	
⚠103	1-775-786-21	CORD, POWER (UK, EA)	
⚠103	1-777-071-53	CORD, POWER (AEP, E51, RU)	
⚠103	1-783-820-11	CORD, POWER (US)	
⚠103	1-827-226-11	CORD, POWER (E3)	
* 104	3-703-244-00	BUSHING (2104), CORD (EXCEPT E3)	
104	3-703-571-11	BUSHING (S) (4516), CORD (E3)	
105	1-500-497-11	FILTER, CLAMP (FERRITE CORE)	
106	1-469-854-11	CORE, FERRITE (US)	
107	1-500-386-11	FILTER, CLAMP (FERRITE CORE) (US)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

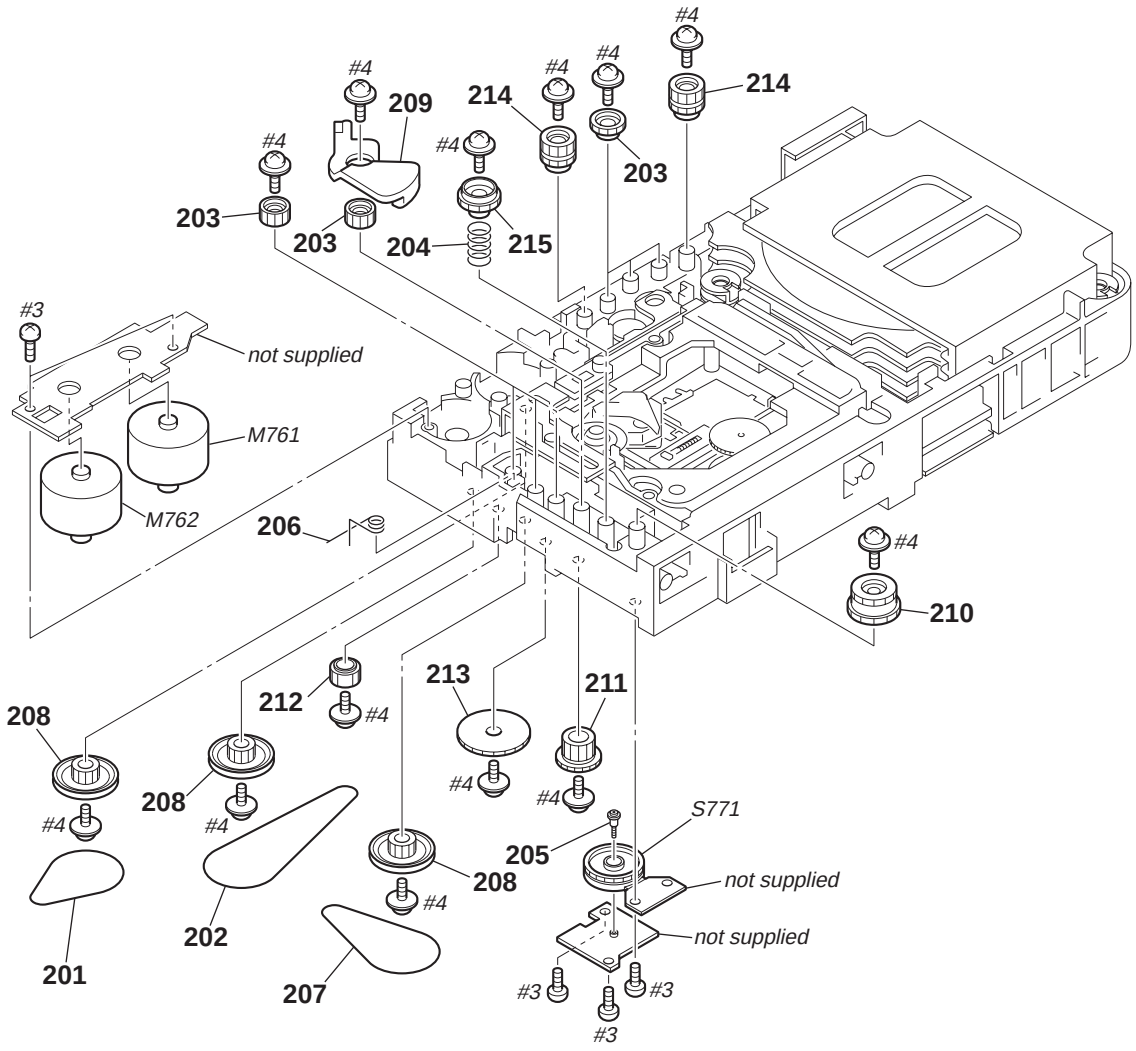
8-4. CD MECHANISM DECK SECTION-1 (CDM81B-F1BD81A)



Ref. No.	Part No.	Description	Remarks
151	4-251-849-01	LEVER (SW2)	
152	4-251-991-01	SPRING (SW2), TORSION	
153	4-251-860-01	LEVER (LOCK)	
154	4-251-867-01	SPRING (LOCK), TORSION	
155	4-251-828-01	TRAY (MAIN)	
156	4-252-533-11	PANEL, LOADING	
157	4-251-857-01	COVER (R)	
158	4-251-830-01	SLIDER (ST)	
159	4-251-858-01	COVER (L)	
160	4-251-829-01	TRAY (SUB)	

Ref. No.	Part No.	Description	Remarks
161	X-4955-707-2	PULLEY (A5) ASSY, CHUCKING (CPX22)	
161	X-4955-707-3	PULLEY (A5) ASSY, CHUCKING (NXM3)	
162	1-471-035-11	MAGNET ASSY	
163	4-251-821-01	BRACKET (TOP)	
164	4-231-189-01	PULLEY (B), CHUCKING	
165	4-251-824-01	LIFTER	
166	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
167	4-251-822-01	JOINT (LIFTER)	
#3	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#5	7-685-102-19	SCREW +P 2X4 NON-SLIT TYPE 2	

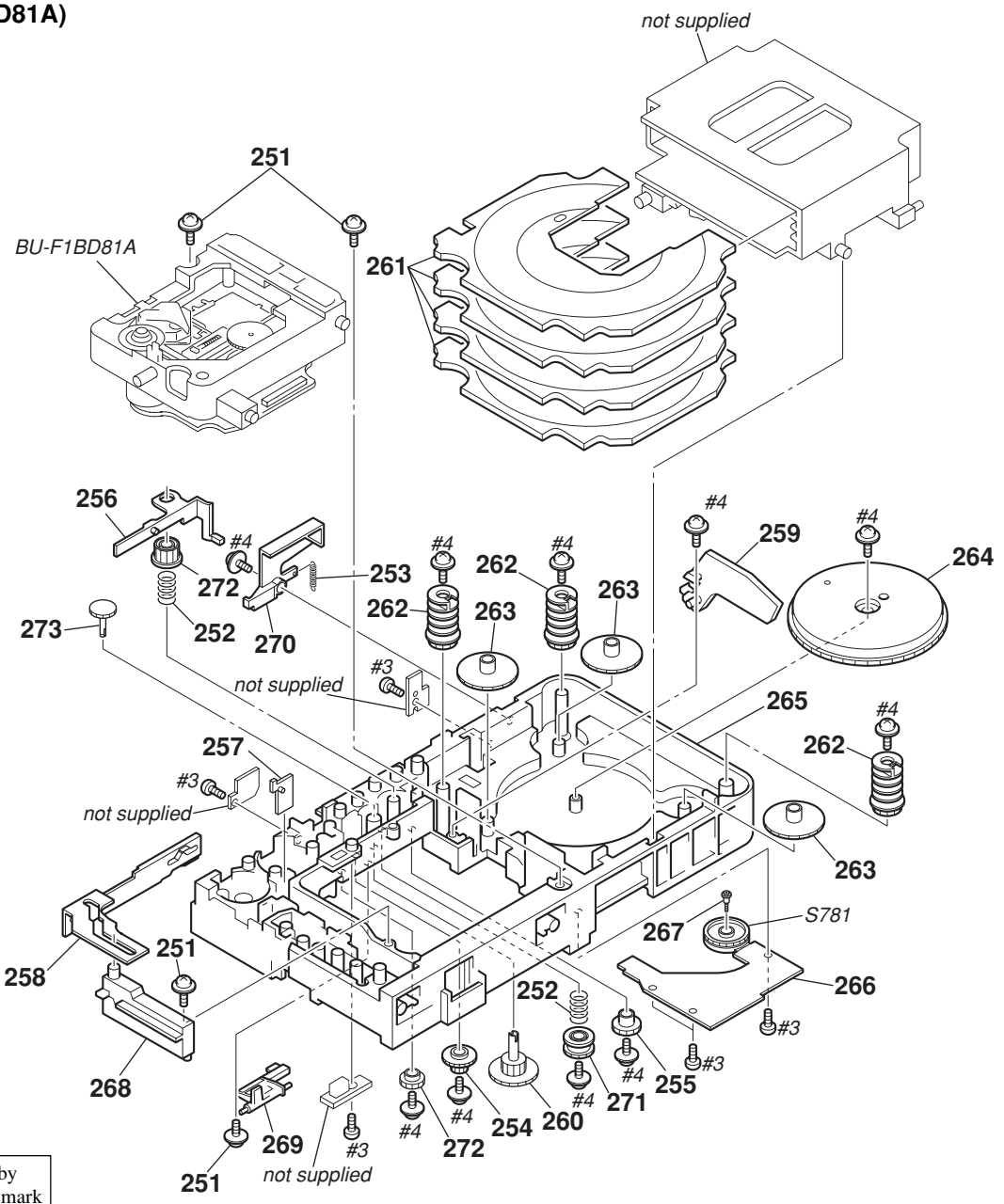
8-5. CD MECHANISM DECK SECTION-2 (CDM81B-F1BD81A)



Ref. No.	Part No.	Description	Remarks
201	4-251-870-01	BELT (BU)	
202	4-251-869-01	BELT (MAIN TRAY)	
203	4-251-841-01	GEAR (SUB TRAY 1)	
204	4-251-873-01	SPRING (MODE), COMPRESSION	
205	4-239-618-02	SCREW (+PWH, 2X6), STEP TAPPING	
206	4-251-872-01	SPRING (LEVER), TORSION	
207	4-251-868-01	BELT (SUB TRAY)	
208	4-251-853-01	PULLEY (BU)	
209	4-251-834-01	LEVER (MAIN TRAY)	
210	4-251-852-01	GEAR (MAIN TRAY 3)	

Ref. No.	Part No.	Description	Remarks
211	4-251-856-01	GEAR (BU2)	
212	4-251-850-01	GEAR (MAIN TRAY 1)	
213	4-251-854-01	GEAR (BU1)	
214	4-251-842-01	GEAR (SUB TRAY 2)	
215	4-251-851-01	GEAR (MAIN TRAY 2)	
M761	A-4713-174-A	MOTOR (81) ASSY (LD/ST MOTOR)	
M762	A-4713-174-A	MOTOR (81) ASSY (BU U/D MOTOR)	
S771	1-478-552-11	ENCODER, ROTARY	
#3	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#4	7-685-902-21	SCREW +PTPWH 2.6X8 (TYPE2)	

8-6. CD MECHANISM DECK SECTION-3 (CDM81B-F1BD81A)

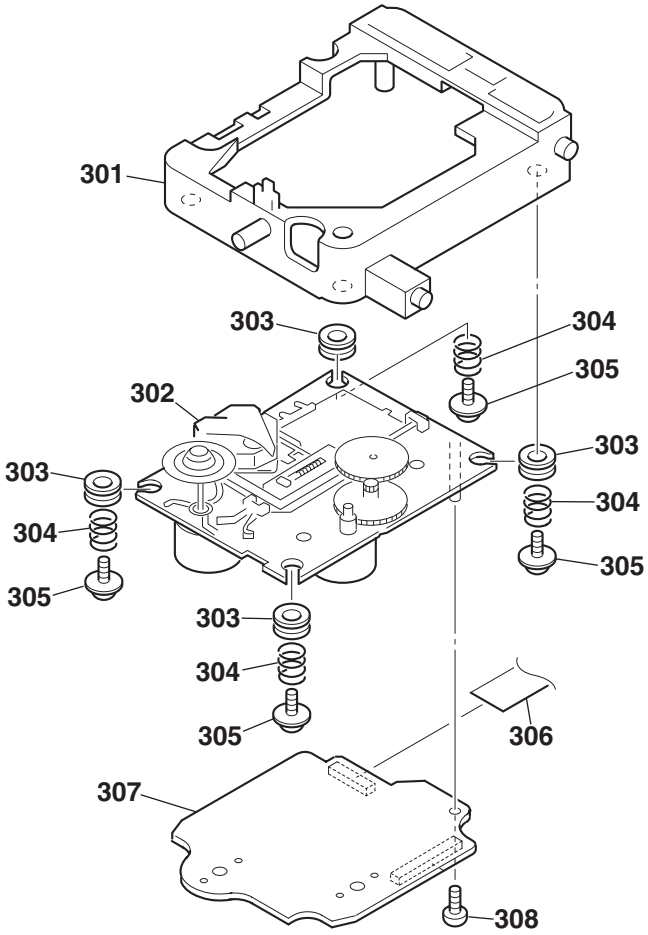


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
251	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
252	4-251-873-01	SPRING (MODE), COMPRESSION	
253	4-251-874-01	SPRING (SW), TENSION	
254	4-251-844-01	GEAR (SS2)	
255	4-251-835-01	GEAR (STOCKER 1)	
256	4-251-833-01	LEVER (SUB TRAY)	
257	4-251-843-01	LEVER (RELEASE)	
258	4-251-831-01	LEVER (MODE)	
259	4-251-862-01	SHUTTER (TRAY)	
260	4-251-845-01	GEAR (SS3)	
261	4-251-829-01	TRAY (SUB)	
262	4-251-827-01	CAM (STOCKER)	
263	4-251-836-01	GEAR (STOCKER 2)	

Ref. No.	Part No.	Description	Remarks
264	4-251-838-01	GEAR (STOCKER 3)	
265	4-251-823-01	CHASSIS (CDM81)	
266	A-4750-232-A	RELAY MOUNTED PC BOARD	
267	4-239-618-02	SCREW (+PWH, 2X6), STEP TAPPING	
268	4-251-825-01	CAM (BU)	
269	4-251-832-01	LEVER (STOCKER)	
270	4-251-861-01	LEVER (SW)	
271	4-251-839-01	GEAR (STOCKER 4)	
272	4-251-840-01	GEAR (SUB TRAY)	
273	4-251-847-01	GEAR (SS4)	
S781	1-478-551-11	ENCODER, ROTARY	
#3	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#4	7-685-902-21	SCREW +PTPWH 2.6X8 (TYPE2)	

8-7. BASE UNIT (BU-F1BD81A)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
301	X-4956-102-1	HOLDER (215) ASSY	
⚠302	8-820-244-01	OPTICAL PICK-UP (KSM-215DCP/C2NP)	
303	4-227-549-11	INSULATOR	
304	4-227-045-11	SPRING (INSULATOR), COIL	
305	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
306	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)	
307	A-4751-045-A	CD (A) BOARD, COMPLETE	
308	4-951-620-01	SCREW (2.6X8), +BVTP	

BD

SECTION 9
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...
- Abbreviation
  E3 : 240V AC Area in E model
  E51 : Chilean and Peruvian model
  EA : Saudi Arabia model
  RU : Russian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remarks
	A-4751-045-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C10	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C11	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C14	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C15	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C16	1-115-156-11	CERAMIC CHIP	1uF		10V
C17	1-126-246-11	ELECT CHIP	220uF	20%	4V
C18	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C111	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C112	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C113	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C114	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C115	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C116	1-128-995-21	ELECT CHIP	100uF	20%	10V
C122	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C123	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C124	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C125	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C131	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C132	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C133	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C134	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C141	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C142	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C143	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C151	1-128-995-21	ELECT CHIP	100uF	20%	10V
C161	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C162	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C163	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C171	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C172	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C174	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C181	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C182	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C183	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C184	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C185	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C186	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C194	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C195	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C196	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V
C203	1-128-995-21	ELECT CHIP	100uF	20%	10V
C209	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C210	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C211	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C212	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C213	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C251	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C252	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C255	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C257	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C258	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C259	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C260	1-128-394-11	ELECT CHIP	220uF	20%	10V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C305	1-126-246-11	ELECT CHIP	220uF	20%	4V
C306	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C307	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C308	1-126-208-21	ELECT CHIP	47uF	20%	4V
C309	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C310	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C311	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C312	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C313	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C314	1-126-208-21	ELECT CHIP	47uF	20%	4V
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C316	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C317	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C318	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C320	1-216-864-11	SHORT CHIP	0		
		< CONNECTOR >			
CN101	1-770-425-11	CONNECTOR, FFC/FPC 16P			
CN201	1-818-350-11	CONNECTOR (FFC) 27P			
		< FERRITE BEAD >			
FB301	1-500-445-21	FERRITE, EMI (SMD) (2012)			

Ref. No.	Part No.	Description			Remarks
		< IC >			
IC101	8-752-425-12	IC CXD3059AR			
IC251	6-705-808-01	IC BA5947FM			
IC301	6-705-365-01	IC TC94A34FG-002			
IC303	6-705-807-01	IC BH15FB1WG			
		< TRANSISTOR >			
Q10	6-550-363-01	TRANSISTOR 2SB1690KT146			
		< RESISTOR >			
R10	1-216-791-11	METAL CHIP	3.3	5%	1/10W
R11	1-216-864-11	SHORT CHIP	0		
R12	1-216-845-11	METAL CHIP	100K	5%	1/10W
R13	1-218-446-11	METAL CHIP	1	5%	1/10W
R111	1-216-821-11	METAL CHIP	1K	5%	1/10W
R112	1-216-835-11	METAL CHIP	15K	5%	1/10W
R113	1-216-821-11	METAL CHIP	1K	5%	1/10W
R114	1-216-835-11	METAL CHIP	15K	5%	1/10W
R121	1-216-835-11	METAL CHIP	15K	5%	1/10W
R131	1-216-857-11	METAL CHIP	1M	5%	1/10W
R132	1-216-833-11	METAL CHIP	10K	5%	1/10W
R133	1-216-848-11	METAL CHIP	180K	5%	1/10W
R141	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R142	1-216-821-11	METAL CHIP	1K	5%	1/10W
R143	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R151	1-216-864-11	SHORT CHIP	0		
R161	1-216-809-11	METAL CHIP	100	5%	1/10W
R162	1-216-841-11	METAL CHIP	47K	5%	1/10W
R163	1-216-809-11	METAL CHIP	100	5%	1/10W
R165	1-216-864-11	SHORT CHIP	0		
R171	1-216-817-11	METAL CHIP	470	5%	1/10W
R172	1-216-857-11	METAL CHIP	1M	5%	1/10W
R173	1-216-295-91	SHORT CHIP	0		
R181	1-216-809-11	METAL CHIP	100	5%	1/10W
R182	1-216-809-11	METAL CHIP	100	5%	1/10W
R191	1-216-864-11	SHORT CHIP	0		
R201	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R203	1-216-864-11	SHORT CHIP	0		
R204	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R205	1-216-864-11	SHORT CHIP	0		
R251	1-216-833-11	METAL CHIP	10K	5%	1/10W
R252	1-216-837-11	METAL CHIP	22K	5%	1/10W
R253	1-216-833-11	METAL CHIP	10K	5%	1/10W
R301	1-216-845-11	METAL CHIP	100K	5%	1/10W
R302	1-216-833-11	METAL CHIP	10K	5%	1/10W
R303	1-216-845-11	METAL CHIP	100K	5%	1/10W
R305	1-216-845-11	METAL CHIP	100K	5%	1/10W
R306	1-216-864-11	SHORT CHIP	0		
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R313	1-216-813-11	METAL CHIP	220	5%	1/10W
R351	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-809-11	METAL CHIP	100	5%	1/10W
R353	1-216-809-11	METAL CHIP	100	5%	1/10W
R354	1-216-809-11	METAL CHIP	100	5%	1/10W
R401	1-216-809-11	METAL CHIP	100	5%	1/10W
R402	1-216-809-11	METAL CHIP	100	5%	1/10W
R403	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-809-11	METAL CHIP	100	5%	1/10W
R406	1-216-809-11	METAL CHIP	100	5%	1/10W
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R408	1-216-809-11	METAL CHIP	100	5%	1/10W
R409	1-216-809-11	METAL CHIP	100	5%	1/10W
R410	1-216-809-11	METAL CHIP	100	5%	1/10W
R411	1-216-809-11	METAL CHIP	100	5%	1/10W
R412	1-216-809-11	METAL CHIP	100	5%	1/10W
R419	1-216-809-11	METAL CHIP	100	5%	1/10W
		< SWITCH >			
S101	1-771-853-11	SWITCH, DETECTION (LIMIT)			
		< VIBRATOR >			
X171	1-767-408-21	VIBRATOR, CRYSTAL (16.9MHz)			
**********					
		DISC SW BOARD			
		**********			
		< CAPACITOR >			
C1009	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< DIODE >			
D1001	8-719-058-64	DIODE SEL5823A-TP15 (DISC 1)			
D1002	8-719-058-64	DIODE SEL5823A-TP15 (DISC 2)			
D1003	8-719-058-64	DIODE SEL5823A-TP15 (DISC 3)			
D1004	8-719-058-64	DIODE SEL5823A-TP15 (DISC 4)			
D1005	8-719-058-64	DIODE SEL5823A-TP15 (DISC 5)			
		< TRANSISTOR >			
Q1001	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q1002	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q1003	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q1004	8-729-027-43	TRANSISTOR DTC114EKA-T146			
Q1005	8-729-027-43	TRANSISTOR DTC114EKA-T146			
		< RESISTOR >			
R1001	1-216-819-11	METAL CHIP	680	5%	1/10W
R1002	1-216-819-11	METAL CHIP	680	5%	1/10W
R1003	1-216-819-11	METAL CHIP	680	5%	1/10W
R1004	1-216-819-11	METAL CHIP	680	5%	1/10W
R1005	1-216-819-11	METAL CHIP	680	5%	1/10W
R1006	1-216-819-11	METAL CHIP	680	5%	1/10W
R1007	1-216-819-11	METAL CHIP	680	5%	1/10W
R1008	1-216-819-11	METAL CHIP	680	5%	1/10W
R1009	1-216-819-11	METAL CHIP	680	5%	1/10W
R1010	1-216-819-11	METAL CHIP	680	5%	1/10W
R1011	1-216-813-11	METAL CHIP	220	5%	1/10W
R1012	1-216-815-11	METAL CHIP	330	5%	1/10W
R1013	1-216-817-11	METAL CHIP	470	5%	1/10W
R1014	1-216-819-11	METAL CHIP	680	5%	1/10W
		< SWITCH >			
S1001	1-762-875-21	SWITCH, KEYBOARD (DISC 1)			
S1002	1-762-875-21	SWITCH, KEYBOARD (DISC 2)			
S1003	1-762-875-21	SWITCH, KEYBOARD (DISC 3)			
S1004	1-762-875-21	SWITCH, KEYBOARD (DISC 4)			
S1005	1-762-875-21	SWITCH, KEYBOARD (DISC 5)			
**********					

HP **MAIN**

Ref. No.	Part No.	Description			Remarks
		HP BOARD			
		********			
		< CAPACITOR >			
C1093	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C1094	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CN1062	1-785-330-11	PIN, CONNECTOR (LIGHT ANGLE) 4P			
		< FERRITE BEAD >			
FB1001	1-500-245-11	INDUCTOR, FERRITE BEAD			
FB1002	1-500-245-11	INDUCTOR, FERRITE BEAD			
FB1003	1-500-245-11	INDUCTOR, FERRITE BEAD			
FB1004	1-500-245-11	INDUCTOR, FERRITE BEAD			
		< JACK >			
J1063	1-750-032-11	JACK (DIA. 3.5) (PHONES)			
		< SHORT >			
JR1080	1-216-864-11	SHORT CHIP	0		
JR1081	1-216-864-11	SHORT CHIP	0		
		< RESISTOR >			
R1088	1-216-864-11	SHORT CHIP	0		
**********					
	A-1052-039-A	MAIN BOARD, COMPLETE (EA)			
	A-4750-856-A	MAIN BOARD, COMPLETE (AEP, UK)			
	A-4750-931-A	MAIN BOARD, COMPLETE (RU)			
	A-4750-933-A	MAIN BOARD, COMPLETE (E3)			
	A-4750-935-A	MAIN BOARD, COMPLETE (E51)			
	A-4750-937-A	MAIN BOARD, COMPLETE (US)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
		< CAPACITOR >			
C1	1-126-964-11	ELECT	10uF	20%	50V
C2	1-126-964-11	ELECT	10uF	20%	50V
C21	1-126-963-11	ELECT	4.7uF	20%	50V
C22	1-126-963-11	ELECT	4.7uF	20%	50V
C25	1-126-963-11	ELECT	4.7uF	20%	50V
C26	1-126-963-11	ELECT	4.7uF	20%	50V
C27	1-104-658-91	ELECT	100uF	20%	10V
C28	1-104-658-91	ELECT	100uF	20%	10V
C35	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C36	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C37	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C38	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C39	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C40	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C70	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C75	1-126-964-11	ELECT	10uF	20%	50V
C77	1-126-925-91	ELECT	470uF	20%	10V
C79	1-126-964-11	ELECT	10uF	20%	50V
C85	1-126-964-11	ELECT	10uF	20%	50V
C87	1-126-925-91	ELECT	470uF	20%	10V
C89	1-126-964-11	ELECT	10uF	20%	50V
C90	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C93	1-126-926-11	ELECT	1000uF	20%	10V
C94	1-104-658-91	ELECT	100uF	20%	10V
C100	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C101	1-126-964-11	ELECT	10uF	20%	50V
C102	1-126-964-11	ELECT	10uF	20%	50V
C103	1-126-964-11	ELECT	10uF	20%	50V
C104	1-126-964-11	ELECT	10uF	20%	50V
C105	1-136-497-81	FILM	0.1uF	5%	50V
C106	1-126-964-11	ELECT	10uF	20%	50V
C107	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C108	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C109	1-126-964-11	ELECT	10uF	20%	50V
C110	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C111	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C112	1-126-964-11	ELECT	10uF	20%	50V
C115	1-126-964-11	ELECT	10uF	20%	50V
C116	1-126-964-11	ELECT	10uF	20%	50V
C117	1-126-960-11	ELECT	1uF	20%	50V
C118	1-130-483-00	MYLAR	0.01uF	5%	50V
C119	1-126-947-11	ELECT	47uF	20%	35V
C121	1-136-177-00	FILM	1uF	5%	50V
C122	1-126-963-11	ELECT	4.7uF	20%	50V
C123	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C124	1-104-658-91	ELECT	100uF	20%	10V
C125	1-104-658-91	ELECT	100uF	20%	10V
C126	1-104-658-91	ELECT	100uF	20%	10V
C127	1-104-658-91	ELECT	100uF	20%	10V
C131	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C132	1-130-483-00	MYLAR	0.01uF	5%	50V
C133	1-130-483-00	MYLAR	0.01uF	5%	50V
C134	1-126-964-11	ELECT	10uF	20%	50V
C135	1-126-960-11	ELECT	1uF	20%	50V
C141	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C142	1-126-964-11	ELECT	10uF	20%	50V
C146	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C147	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C148	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C150	1-163-077-00	CERAMIC CHIP	0.1uF		50V
C151	1-126-964-11	ELECT	10uF	20%	50V
C152	1-126-964-11	ELECT	10uF	20%	50V
C154	1-126-964-11	ELECT	10uF	20%	50V
C155	1-136-497-81	FILM	0.1uF	5%	50V
C156	1-126-964-11	ELECT	10uF	20%	50V
C157	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C158	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C159	1-126-964-11	ELECT	10uF	20%	50V
C160	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C161	1-164-174-11	CERAMIC CHIP	0.0082uF	10%	25V
C162	1-126-964-11	ELECT	10uF	20%	50V
C165	1-126-964-11	ELECT	10uF	20%	50V
C166	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remarks
C167	1-126-960-11	ELECT	1uF	20%	50V
C168	1-130-483-00	MYLAR	0.01uF	5%	50V
C169	1-126-947-11	ELECT	47uF	20%	35V
C173	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C174	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C183	1-126-960-11	ELECT	1uF	20%	50V
C191	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C192	1-126-964-11	ELECT	10uF	20%	50V
C196	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C197	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C198	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C270	1-126-964-11	ELECT	10uF	20%	50V
C271	1-126-964-11	ELECT	10uF	20%	50V
C301	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C302	1-126-964-11	ELECT	10uF	20%	50V
C303	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C304	1-126-964-11	ELECT	10uF	20%	50V
C305	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C306	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C307	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C308	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C311	1-130-481-00	MYLAR	0.0068uF	5%	50V
C312	1-130-483-00	MYLAR	0.01uF	5%	50V
C313	1-126-947-11	ELECT	47uF	20%	35V
C314	1-137-150-11	FILM	0.01uF	5%	100V
C315	1-130-479-00	MYLAR	0.0047uF	5%	50V
C322	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C324	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C351	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C352	1-126-964-11	ELECT	10uF	20%	50V
C353	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C354	1-126-964-11	ELECT	10uF	20%	50V
C355	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C356	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C357	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C358	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C370	1-104-658-91	ELECT	100uF	20%	10V
C372	1-104-655-91	ELECT	470uF	20%	6.3V
C373	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C375	1-126-916-11	ELECT	1000uF	20%	6.3V
C379	1-104-655-91	ELECT	470uF	20%	6.3V
C382	1-126-925-91	ELECT	470uF	20%	10V
C383	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C384	1-104-655-91	ELECT	470uF	20%	6.3V
C390	1-126-965-91	ELECT	22uF	20%	50V
C391	1-136-497-81	FILM	0.1uF	5%	50V
C392	1-136-497-81	FILM	0.1uF	5%	50V
C393	1-126-964-11	ELECT	10uF	20%	50V
C410	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C411	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C412	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C416	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C417	1-126-916-11	ELECT	1000uF	20%	6.3V
C462	1-104-658-91	ELECT	100uF	20%	10V
C463	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C475	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C476	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C497	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C498	1-126-964-11	ELECT	10uF	20%	50V
C499	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C900	1-126-937-11	ELECT	4700uF	20%	16V
C901	1-126-956-91	ELECT	0.1uF	20%	50V
C902	1-104-658-91	ELECT	100uF	20%	10V
C903	1-126-964-11	ELECT	10uF	20%	50V
C904	1-104-658-91	ELECT	100uF	20%	10V
C905	1-126-956-91	ELECT	0.1uF	20%	50V
C906	1-104-658-91	ELECT	100uF	20%	10V
C919	1-126-964-11	ELECT	10uF	20%	50V
C920	1-126-964-11	ELECT	10uF	20%	50V
C930	1-126-768-11	ELECT	2200uF	20%	16V
C952	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C953	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C972	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C973	1-164-156-11	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

CN101	1-691-768-11	PLUG (MICRO CONNECTOR) 6P	
CN105	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
CN106	1-784-780-11	CONNECTOR, FFC 19P	
CN107	1-785-316-11	PIN, CONNECTOR (STRAIGHT) 4P	
CN109	1-784-774-11	CONNECTOR, FFC 13P	
CN110	1-784-776-11	CONNECTOR, FFC 15P	
CN112	1-784-766-11	CONNECTOR, FFC 5P	
CN204	1-568-830-11	CONNECTOR, FFC 11P (EXCEPT AEP, UK)	
CN204	1-784-776-11	CONNECTOR, FFC 15P (AEP, UK)	
* CN301	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
* CN302	1-564-724-11	PIN, CONNECTOR (SMALL TYPE) 8P	
CN303	1-784-774-11	CONNECTOR, FFC 13P	
* CN304	1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P	
CN371	1-779-295-11	CONNECTOR, FFC (LIF (NON-ZIF)) 27P	
CN372	1-779-289-11	CONNECTOR, FFC (LIF (NON-ZIF)) 21P	
CN401	1-785-316-11	PIN, CONNECTOR (STRAIGHT) 4P	

< DIODE >

D181	8-719-988-61	DIODE 1SS355TE-17
D182	8-719-988-61	DIODE 1SS355TE-17
D183	8-719-988-61	DIODE 1SS355TE-17
D321	8-719-988-61	DIODE 1SS355TE-17
D322	8-719-988-61	DIODE 1SS355TE-17
D371	6-500-522-31	DIODE 10EDB40-TB5
D372	6-500-522-31	DIODE 10EDB40-TB5
D373	6-500-522-31	DIODE 10EDB40-TB5
D391	8-719-988-61	DIODE 1SS355TE-17
D392	8-719-988-61	DIODE 1SS355TE-17
D393	8-719-988-61	DIODE 1SS355TE-17
D394	8-719-988-61	DIODE 1SS355TE-17
D395	8-719-988-61	DIODE 1SS355TE-17
D396	8-719-988-61	DIODE 1SS355TE-17
D397	8-719-988-61	DIODE 1SS355TE-17
D903	6-500-522-31	DIODE 10EDB40-TB5
D904	8-719-988-61	DIODE 1SS355TE-17
D905	8-719-083-58	DIODE UDZSTE-173.9B

MAIN

Ref. No.	Part No.	Description	Remarks
		< EARTH TERMINAL >	
EP901	1-537-738-21	TERMINAL, GROUND	
		< FERRITE BEAD >	
FB30	1-469-125-21	FERRITE, EMI (SMD) (1608)	
FB34	1-469-125-21	FERRITE, EMI (SMD) (1608)	
FB50	1-469-125-21	FERRITE, EMI (SMD) (1608)	
FB54	1-469-125-21	FERRITE, EMI (SMD) (1608)	
FB80	1-469-125-21	FERRITE, EMI (SMD) (1608)	
FB84	1-469-125-21	FERRITE, EMI (SMD) (1608)	
FB371	1-216-864-11	SHORT CHIP 0	
FB372	1-216-864-11	SHORT CHIP 0	
FB373	1-216-864-11	SHORT CHIP 0	
FB374	1-216-864-11	SHORT CHIP 0	
		< IC >	
IC3	8-759-359-49	IC NJM3414AV (TE2)	
IC101	6-705-667-01	IC M61537FP-RF0G	
IC301	8-749-019-25	IC TOTX141 (DIGITAL OUT)	
IC391	8-759-532-64	IC M62703SL-TP	
IC401	6-803-926-01	IC M30622MGN-B28FPU0	
IC901	8-759-701-59	IC NJM78M09FA	
IC902	8-759-701-59	IC NJM78M09FA	
IC903	6-702-771-01	IC TA78033LS	
IC951	6-703-679-11	IC PT8300R-TP	
IC971	6-703-679-11	IC PT8300R-TP	
		< JACK >	
J102	1-778-940-11	JACK 2P (VIDEO(MD))	
		< SHORT >	
JR1	1-216-864-11	SHORT CHIP 0	
JR101	1-216-864-11	SHORT CHIP 0	
JR102	1-216-864-11	SHORT CHIP 0	
JR103	1-216-296-11	SHORT CHIP 0	
JR104	1-216-296-11	SHORT CHIP 0	
JR105	1-216-296-11	SHORT CHIP 0	
JR106	1-216-864-11	SHORT CHIP 0	
JR107	1-216-296-11	SHORT CHIP 0	
JR108	1-216-296-11	SHORT CHIP 0	
JR109	1-216-296-11	SHORT CHIP 0	
JR110	1-216-864-11	SHORT CHIP 0	
JR111	1-216-296-11	SHORT CHIP 0	
JR112	1-216-864-11	SHORT CHIP 0	
JR113	1-216-296-11	SHORT CHIP 0	
JR114	1-216-864-11	SHORT CHIP 0	
JR115	1-216-296-11	SHORT CHIP 0	
JR116	1-216-864-11	SHORT CHIP 0	
JR117	1-216-296-11	SHORT CHIP 0	
JR118	1-216-864-11	SHORT CHIP 0	
JR119	1-216-864-11	SHORT CHIP 0	
JR120	1-216-864-11	SHORT CHIP 0	
JR121	1-216-864-11	SHORT CHIP 0	
JR122	1-216-296-11	SHORT CHIP 0	
JR123	1-216-864-11	SHORT CHIP 0	
JR124	1-216-296-11	SHORT CHIP 0	
JR125	1-216-864-11	SHORT CHIP 0	
JR126	1-216-296-11	SHORT CHIP 0	
JR127	1-216-296-11	SHORT CHIP 0	
JR128	1-216-864-11	SHORT CHIP 0	
JR203	1-216-864-11	SHORT CHIP 0	
JR204	1-216-296-11	SHORT CHIP 0	
JR205	1-216-296-11	SHORT CHIP 0	
JR206	1-216-296-11	SHORT CHIP 0	
JR261	1-216-296-11	SHORT CHIP 0	
JR418	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP, UK)	
JR449	1-216-864-11	SHORT CHIP 0 (EXCEPT AEP, UK)	
		< COIL >	
L301	1-410-780-11	INDUCTOR 27mH	
L311	1-414-189-31	INDUCTOR 100uH	
L351	1-410-780-11	INDUCTOR 27mH	
L370	1-412-064-11	INDUCTOR 100uH	
L951	1-216-296-11	SHORT CHIP 0	
L971	1-216-296-11	SHORT CHIP 0	
		< TRANSISTOR >	
Q1	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q2	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q21	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q22	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q25	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q26	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q27	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q28	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q29	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q30	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q31	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q32	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q33	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q34	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q71	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q81	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q82	8-729-142-48	TRANSISTOR 2SD1616-TP-LK	
Q103	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q104	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q140	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q153	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q154	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q270	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q271	6-550-889-01	TRANSISTOR 2SC5938-T112-1B	
Q301	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q302	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q303	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q311	8-729-216-22	TRANSISTOR 2SA1162-G	
Q312	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q313	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q314	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q315	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q316	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q317	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q318	8-729-142-46	TRANSISTOR 2SC2001-LK	

Ref. No.	Part No.	Description			Remarks
Q321	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q322	8-729-140-04	TRANSISTOR	2SB1116A-L		
Q323	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q324	8-729-140-04	TRANSISTOR	2SB1116A-L		
Q326	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q327	8-729-140-04	TRANSISTOR	2SB1116A-L		
Q341	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q342	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q343	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q351	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16		
Q352	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16		
Q353	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16		
Q391	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q906	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
		< RESISTOR >			
R1	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3	1-216-821-11	METAL CHIP	1K	5%	1/10W
R4	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R5	1-216-833-11	METAL CHIP	10K	5%	1/10W
R6	1-216-821-11	METAL CHIP	1K	5%	1/10W
R21	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R22	1-216-837-11	METAL CHIP	22K	5%	1/10W
R23	1-216-845-11	METAL CHIP	100K	5%	1/10W
R27	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R28	1-216-837-11	METAL CHIP	22K	5%	1/10W
R29	1-216-845-11	METAL CHIP	100K	5%	1/10W
R30	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R31	1-216-837-11	METAL CHIP	22K	5%	1/10W
R32	1-216-845-11	METAL CHIP	100K	5%	1/10W
R33	1-216-845-11	METAL CHIP	100K	5%	1/10W
R34	1-216-837-11	METAL CHIP	22K	5%	1/10W
R35	1-216-845-11	METAL CHIP	100K	5%	1/10W
R36	1-216-837-11	METAL CHIP	22K	5%	1/10W
R37	1-216-845-11	METAL CHIP	100K	5%	1/10W
R38	1-216-837-11	METAL CHIP	22K	5%	1/10W
R39	1-216-864-11	SHORT CHIP	0		
R50	1-216-841-11	METAL CHIP	47K	5%	1/10W
R59	1-216-805-11	METAL CHIP	47	5%	1/10W
R60	1-216-841-11	METAL CHIP	47K	5%	1/10W
R69	1-216-805-11	METAL CHIP	47	5%	1/10W
R75	1-216-833-11	METAL CHIP	10K	5%	1/10W
R76	1-216-841-11	METAL CHIP	47K	5%	1/10W
R77	1-216-845-11	METAL CHIP	100K	5%	1/10W
R78	1-216-821-11	METAL CHIP	1K	5%	1/10W
R79	1-216-805-11	METAL CHIP	47	5%	1/10W
R80	1-216-833-11	METAL CHIP	10K	5%	1/10W
R85	1-216-833-11	METAL CHIP	10K	5%	1/10W
R86	1-216-841-11	METAL CHIP	47K	5%	1/10W
R87	1-216-845-11	METAL CHIP	100K	5%	1/10W
R88	1-216-821-11	METAL CHIP	1K	5%	1/10W
R89	1-216-805-11	METAL CHIP	47	5%	1/10W
R90	1-216-833-11	METAL CHIP	10K	5%	1/10W
R98	1-216-821-11	METAL CHIP	1K	5%	1/10W
R101	1-216-835-11	METAL CHIP	15K	5%	1/10W
R102	1-216-841-11	METAL CHIP	47K	5%	1/10W
R103	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R104	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R105	1-216-833-11	METAL CHIP	10K	5%	1/10W
R109	1-216-841-11	METAL CHIP	47K	5%	1/10W
R110	1-216-821-11	METAL CHIP	1K	5%	1/10W
R111	1-216-821-11	METAL CHIP	1K	5%	1/10W
R112	1-216-834-11	METAL CHIP	12K	5%	1/10W
R113	1-216-851-11	METAL CHIP	330K	5%	1/10W
R114	1-216-812-11	METAL CHIP	180	5%	1/10W
R118	1-216-809-11	METAL CHIP	100	5%	1/10W
R119	1-216-833-11	METAL CHIP	10K	5%	1/10W
R121	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R122	1-216-835-11	METAL CHIP	15K	5%	1/10W
R123	1-216-857-11	METAL CHIP	1M	5%	1/10W
R126	1-216-813-11	METAL CHIP	220	5%	1/10W
R127	1-216-813-11	METAL CHIP	220	5%	1/10W
R129	1-216-835-11	METAL CHIP	15K	5%	1/10W
R130	1-216-809-11	METAL CHIP	100	5%	1/10W
R131	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R132	1-216-838-11	METAL CHIP	27K	5%	1/10W
R133	1-216-833-11	METAL CHIP	10K	5%	1/10W
R141	1-216-821-11	METAL CHIP	1K	5%	1/10W
R142	1-216-845-11	METAL CHIP	100K	5%	1/10W
R151	1-216-835-11	METAL CHIP	15K	5%	1/10W
R152	1-216-841-11	METAL CHIP	47K	5%	1/10W
R153	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R154	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R155	1-216-833-11	METAL CHIP	10K	5%	1/10W
R159	1-216-841-11	METAL CHIP	47K	5%	1/10W
R160	1-216-821-11	METAL CHIP	1K	5%	1/10W
R161	1-216-821-11	METAL CHIP	1K	5%	1/10W
R162	1-216-834-11	METAL CHIP	12K	5%	1/10W
R163	1-216-851-11	METAL CHIP	330K	5%	1/10W
R164	1-216-812-11	METAL CHIP	180	5%	1/10W
R168	1-216-809-11	METAL CHIP	100	5%	1/10W
R169	1-216-833-11	METAL CHIP	10K	5%	1/10W
R180	1-216-809-11	METAL CHIP	100	5%	1/10W
R186	1-216-864-11	SHORT CHIP	0		
R187	1-216-853-11	METAL CHIP	470K	5%	1/10W
R188	1-216-815-11	METAL CHIP	330	5%	1/10W
R189	1-216-841-11	METAL CHIP	47K	5%	1/10W
R191	1-216-821-11	METAL CHIP	1K	5%	1/10W
R192	1-216-845-11	METAL CHIP	100K	5%	1/10W
R241	1-216-864-11	SHORT CHIP	0		
R243	1-216-864-11	SHORT CHIP	0		
R246	1-216-833-11	METAL CHIP	10K	5%	1/10W
R247	1-216-833-11	METAL CHIP	10K	5%	1/10W
R270	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R272	1-216-821-11	METAL CHIP	1K	5%	1/10W
R273	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R275	1-216-821-11	METAL CHIP	1K	5%	1/10W
R294	1-216-821-11	METAL CHIP	1K	5%	1/10W
R296	1-216-833-11	METAL CHIP	10K	5%	1/10W
R298	1-216-821-11	METAL CHIP	1K	5%	1/10W
R299	1-216-833-11	METAL CHIP	10K	5%	1/10W
R301	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R302	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R303	1-216-821-11	METAL CHIP	1K	5%	1/10W
R304	1-216-835-11	METAL CHIP	15K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remarks
R305	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R306	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R309	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R311	1-216-833-11	METAL CHIP	10K	5%	1/10W
R312	1-216-833-11	METAL CHIP	10K	5%	1/10W
R313	1-216-833-11	METAL CHIP	10K	5%	1/10W
R314	1-216-841-11	METAL CHIP	47K	5%	1/10W
R315	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R316	1-216-797-11	METAL CHIP	10	5%	1/10W
R317	1-216-833-11	METAL CHIP	10K	5%	1/10W
R318	1-216-805-11	METAL CHIP	47	5%	1/10W
R319	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R320	1-216-803-11	METAL CHIP	33	5%	1/10W
R321	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R322	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R323	1-216-821-11	METAL CHIP	1K	5%	1/10W
R324	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R325	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R326	1-216-821-11	METAL CHIP	1K	5%	1/10W
R327	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R328	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R329	1-216-841-11	METAL CHIP	47K	5%	1/10W
R330	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R331	1-216-841-11	METAL CHIP	47K	5%	1/10W
R332	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R333	1-216-841-11	METAL CHIP	47K	5%	1/10W
R334	1-216-841-11	METAL CHIP	47K	5%	1/10W
R335	1-216-841-11	METAL CHIP	47K	5%	1/10W
R336	1-216-841-11	METAL CHIP	47K	5%	1/10W
R337	1-216-837-11	METAL CHIP	22K	5%	1/10W
R338	1-216-833-11	METAL CHIP	10K	5%	1/10W
R339	1-216-841-11	METAL CHIP	47K	5%	1/10W
R340	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R341	1-216-833-11	METAL CHIP	10K	5%	1/10W
R342	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R343	1-216-837-11	METAL CHIP	22K	5%	1/10W
R344	1-216-833-11	METAL CHIP	10K	5%	1/10W
R345	1-216-833-11	METAL CHIP	10K	5%	1/10W
R347	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R351	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R352	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R353	1-216-821-11	METAL CHIP	1K	5%	1/10W
R354	1-216-835-11	METAL CHIP	15K	5%	1/10W
R355	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R356	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R357	1-216-833-11	METAL CHIP	10K	5%	1/10W
R359	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R377	1-216-833-11	METAL CHIP	10K	5%	1/10W
R378	1-216-833-11	METAL CHIP	10K	5%	1/10W
R379	1-216-833-11	METAL CHIP	10K	5%	1/10W
R380	1-216-833-11	METAL CHIP	10K	5%	1/10W
R381	1-216-833-11	METAL CHIP	10K	5%	1/10W
R382	1-216-833-11	METAL CHIP	10K	5%	1/10W
R383	1-216-833-11	METAL CHIP	10K	5%	1/10W
R384	1-216-833-11	METAL CHIP	10K	5%	1/10W
R385	1-216-833-11	METAL CHIP	10K	5%	1/10W
R386	1-216-833-11	METAL CHIP	10K	5%	1/10W
R387	1-216-833-11	METAL CHIP	10K	5%	1/10W
R388	1-216-833-11	METAL CHIP	10K	5%	1/10W
R391	1-216-833-11	METAL CHIP	10K	5%	1/10W
R392	1-216-837-11	METAL CHIP	22K	5%	1/10W
R393	1-216-837-11	METAL CHIP	22K	5%	1/10W
R394	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R395	1-216-813-11	METAL CHIP	220	5%	1/10W
R396	1-216-833-11	METAL CHIP	10K	5%	1/10W
R401	1-216-809-11	METAL CHIP	100	5%	1/10W
R402	1-216-809-11	METAL CHIP	100	5%	1/10W
R403	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-809-11	METAL CHIP	100	5%	1/10W
R406	1-216-809-11	METAL CHIP	100	5%	1/10W
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R408	1-216-833-11	METAL CHIP	10K	5%	1/10W
R409	1-216-833-11	METAL CHIP	10K	5%	1/10W
R410	1-216-833-11	METAL CHIP	10K	5%	1/10W
R411	1-216-851-11	METAL CHIP	330K	5%	1/10W
R412	1-216-833-11	METAL CHIP	10K	5%	1/10W
R413	1-216-864-11	SHORT CHIP	0		
R414	1-216-833-11	METAL CHIP	10K	5%	1/10W
R415	1-216-833-11	METAL CHIP	10K	5%	1/10W
R416	1-216-833-11	METAL CHIP	10K	5%	1/10W
R417	1-216-833-11	METAL CHIP	10K	5%	1/10W
R418	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, UK)
R419	1-216-809-11	METAL CHIP	100	5%	1/10W
R420	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R421	1-216-809-11	METAL CHIP	100	5%	1/10W
R422	1-216-809-11	METAL CHIP	100	5%	1/10W
R423	1-216-809-11	METAL CHIP	100	5%	1/10W
R424	1-216-809-11	METAL CHIP	100	5%	1/10W
R425	1-216-809-11	METAL CHIP	100	5%	1/10W
R426	1-216-809-11	METAL CHIP	100	5%	1/10W
R429	1-216-809-11	METAL CHIP	100	5%	1/10W
R430	1-216-809-11	METAL CHIP	100	5%	1/10W
R431	1-216-809-11	METAL CHIP	100	5%	1/10W
R432	1-216-809-11	METAL CHIP	100	5%	1/10W
R433	1-216-809-11	METAL CHIP	100	5%	1/10W
R434	1-216-809-11	METAL CHIP	100	5%	1/10W
R435	1-216-809-11	METAL CHIP	100	5%	1/10W
R436	1-216-809-11	METAL CHIP	100	5%	1/10W
R437	1-216-809-11	METAL CHIP	100	5%	1/10W
R438	1-216-809-11	METAL CHIP	100	5%	1/10W
R439	1-216-809-11	METAL CHIP	100	5%	1/10W
R440	1-216-809-11	METAL CHIP	100	5%	1/10W
R441	1-216-809-11	METAL CHIP	100	5%	1/10W
R442	1-216-809-11	METAL CHIP	100	5%	1/10W
R443	1-216-809-11	METAL CHIP	100	5%	1/10W
R444	1-216-809-11	METAL CHIP	100	5%	1/10W
R445	1-216-809-11	METAL CHIP	100	5%	1/10W
R446	1-216-809-11	METAL CHIP	100	5%	1/10W
R447	1-216-809-11	METAL CHIP	100	5%	1/10W
R448	1-216-809-11	METAL CHIP	100	5%	1/10W
R449	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP, UK)
R450	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R451	1-216-809-11	METAL CHIP	100	5%	1/10W
R452	1-216-809-11	METAL CHIP	100	5%	1/10W
R453	1-216-809-11	METAL CHIP	100	5%	1/10W
R454	1-216-809-11	METAL CHIP	100	5%	1/10W
R455	1-216-809-11	METAL CHIP	100	5%	1/10W
R456	1-216-809-11	METAL CHIP	100	5%	1/10W
R457	1-216-809-11	METAL CHIP	100	5%	1/10W
R458	1-216-809-11	METAL CHIP	100	5%	1/10W
R459	1-216-809-11	METAL CHIP	100	5%	1/10W
R460	1-216-809-11	METAL CHIP	100	5%	1/10W
R461	1-216-809-11	METAL CHIP	100	5%	1/10W
R465	1-216-809-11	METAL CHIP	100	5%	1/10W
R466	1-216-833-11	METAL CHIP	10K	5%	1/10W
R467	1-216-833-11	METAL CHIP	10K	5%	1/10W
R468	1-216-833-11	METAL CHIP	10K	5%	1/10W
R469	1-216-833-11	METAL CHIP	10K	5%	1/10W
R470	1-216-809-11	METAL CHIP	100	5%	1/10W
R471	1-216-809-11	METAL CHIP	100	5%	1/10W
R472	1-216-809-11	METAL CHIP	100	5%	1/10W
R473	1-216-809-11	METAL CHIP	100	5%	1/10W
R474	1-216-809-11	METAL CHIP	100	5%	1/10W
R476	1-216-809-11	METAL CHIP	100	5%	1/10W
R477	1-216-809-11	METAL CHIP	100	5%	1/10W
R478	1-216-809-11	METAL CHIP	100	5%	1/10W
R479	1-216-809-11	METAL CHIP	100	5%	1/10W
R482	1-216-809-11	METAL CHIP	100	5%	1/10W
R483	1-216-809-11	METAL CHIP	100	5%	1/10W
R484	1-216-809-11	METAL CHIP	100	5%	1/10W
R485	1-216-809-11	METAL CHIP	100	5%	1/10W
R486	1-216-809-11	METAL CHIP	100	5%	1/10W
R489	1-216-809-11	METAL CHIP	100	5%	1/10W
R490	1-216-809-11	METAL CHIP	100	5%	1/10W
R492	1-216-811-11	METAL CHIP	150	5%	1/10W (RU)
R492	1-216-821-11	METAL CHIP	1K	5%	1/10W (E51)
R492	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (US)
R492	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (E3, EA)
R492	1-216-864-11	SHORT CHIP	0 (AEP, UK)		
R493	1-216-809-11	METAL CHIP	100	5%	1/10W
R494	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R495	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R496	1-216-821-11	METAL CHIP	1K	5%	1/10W (EA)
R496	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (EXCEPT E3, EA)
R496	1-216-864-11	SHORT CHIP	0 (E3)		
R497	1-216-833-11	METAL CHIP	10K	5%	1/10W
R498	1-216-797-11	METAL CHIP	10	5%	1/10W
R499	1-216-797-11	METAL CHIP	10	5%	1/10W
R914	1-216-821-11	METAL CHIP	1K	5%	1/10W
R915	1-216-821-11	METAL CHIP	1K	5%	1/10W
R952	1-216-809-11	METAL CHIP	100	5%	1/10W
R953	1-216-809-11	METAL CHIP	100	5%	1/10W
R954	1-216-809-11	METAL CHIP	100	5%	1/10W
R955	1-216-809-11	METAL CHIP	100	5%	1/10W
R956	1-216-809-11	METAL CHIP	100	5%	1/10W
R957	1-216-809-11	METAL CHIP	100	5%	1/10W
R958	1-216-809-11	METAL CHIP	100	5%	1/10W
R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R968	1-216-833-11	METAL CHIP	10K	5%	1/10W
R970	1-216-833-11	METAL CHIP	10K	5%	1/10W
R984	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< TRANSFORMER >			
T301	1-433-372-11	TRANSFORMER, BIAS OSCILLATION			
		< VIBRATOR >			
X401	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X402	1-795-482-11	VIBRATOR, CERAMIC (16MHz)			
**********					
		MOTOR BOARD			
		**********			
		< SWITCH >			
S761	1-786-704-11	SWITCH, LEVER (SUB TRAY OUT)			
**********					
	A-4750-849-A	PANEL BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1006	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1021	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1025	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C1026	1-126-964-11	ELECT	10uF	20%	50V
C1028	1-126-964-11	ELECT	10uF	20%	50V
C1029	1-131-992-91	CERAMIC CHIP	100000PF		35V
C1048	1-131-992-91	CERAMIC CHIP	100000PF		35V
C1050	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1051	1-126-969-11	ELECT	220uF	20%	50V
C1052	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1053	1-126-965-91	ELECT	22uF	20%	50V
C1054	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
		< CONNECTOR >			
CN1021	1-784-774-11	CONNECTOR, FFC 13P			
		< DIODE >			
D1021	8-719-058-03	DIODE SEL5423E-TP15 (◄ ►)			
D1022	8-719-059-18	DIODE RD6.2FM-T1			
D1023	8-719-988-61	DIODE 1SS355TE-17			
D1024	8-719-988-61	DIODE 1SS355TE-17			
D1025	8-719-988-61	DIODE 1SS355TE-17			
D1026	8-719-988-61	DIODE 1SS355TE-17			
		< FILTER >			
FL1020	1-518-979-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC1020	6-705-745-01	IC M66005-0131AHPRB0T			

PANEL | **RELAY** | **SENSOR** | **S-MASTER**

Ref. No.	Part No.	Description			Remarks
		< COIL >			
L1021	1-410-671-31	INDUCTOR	47uH		
		< TRANSISTOR >			
Q1021	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q1022	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q1023	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q1024	6-550-065-01	TRANSISTOR	CPH5504-TL-E		
Q1026	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
		< RESISTOR >			
R1020	1-216-809-11	METAL CHIP	100	5%	1/10W
R1021	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1022	1-216-809-11	METAL CHIP	100	5%	1/10W
R1023	1-216-809-11	METAL CHIP	100	5%	1/10W
R1024	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1025	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1026	1-216-813-11	METAL CHIP	220	5%	1/10W
R1027	1-216-815-11	METAL CHIP	330	5%	1/10W
R1028	1-216-817-11	METAL CHIP	470	5%	1/10W
R1029	1-216-819-11	METAL CHIP	680	5%	1/10W
R1030	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1031	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1032	1-216-864-11	SHORT CHIP	0		
R1033	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1034	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1035	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1036	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1037	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1038	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1039	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1040	1-216-839-11	METAL CHIP	33K	5%	1/10W
R1041	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1042	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1043	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1045	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1046	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1051	1-216-809-11	METAL CHIP	100	5%	1/10W
R1052	1-216-809-11	METAL CHIP	100	5%	1/10W
R1100	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1101	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1102	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< SWITCH >			
S1021	1-762-875-21	SWITCH, KEYBOARD (CD)			
S1022	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND)			
S1023	1-762-875-21	SWITCH, KEYBOARD (TAPE A/B)			
S1024	1-762-875-21	SWITCH, KEYBOARD (VIDEO(MD))			
S1025	1-762-875-21	SWITCH, KEYBOARD (DIMMER)			
S1026	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)			
S1027	1-762-875-21	SWITCH, KEYBOARD (● /START)			
S1028	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)			
S1029	1-762-875-21	SWITCH, KEYBOARD (◄◄ ►►)			
S1030	1-762-875-21	SWITCH, KEYBOARD (CD ⏏)			
S1031	1-762-875-21	SWITCH, KEYBOARD (❚❚)			
S1032	1-762-875-21	SWITCH, KEYBOARD (►►❙ TUNING +)			
S1033	1-762-875-21	SWITCH, KEYBOARD (❙◄◄ TUNING -)			
S1034	1-762-875-21	SWITCH, KEYBOARD (ALBUM +)			
S1035	1-762-875-21	SWITCH, KEYBOARD (ALBUM -)			
S1036	1-762-875-21	SWITCH, KEYBOARD (■)			
		< TRANSFORMER >			
T801	1-443-389-11	TRANSFORMER, DC-DC CONVERTER			
**********					
	A-4750-232-A	RELAY BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-126-786-11	ELECT	47uF	20%	16V
C702	1-126-791-11	ELECT	10uF	20%	35V
C761	1-162-306-11	CERAMIC	0.01uF	20%	16V
C762	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< CONNECTOR >			
CN701	1-779-558-21	CONNECTOR, FFC (LIF (NON-ZIF)) 21P			
		< DIODE >			
D701	8-719-921-40	DIODE	MTZJ-4.7C		
D711	8-719-982-10	DIODE	MTZJ-4.3A		
		< IC >			
IC701	8-759-598-69	IC	BA6956AN		
IC711	8-759-598-69	IC	BA6956AN		
		< TRANSISTOR >			
Q751	8-729-119-78	TRANSISTOR	2SC2785-HFE		
		< RESISTOR >			
R701	1-249-415-11	CARBON	680	5%	1/4W
R702	1-247-807-31	CARBON	100	5%	1/4W
R711	1-249-415-11	CARBON	680	5%	1/4W
R712	1-247-807-31	CARBON	100	5%	1/4W
R751	1-247-806-11	CARBON	91	5%	1/4W
R752	1-249-429-11	CARBON	10K	5%	1/4W
R753	1-249-429-11	CARBON	10K	5%	1/4W
R754	1-249-430-11	CARBON	12K	5%	1/4W
R755	1-249-429-11	CARBON	10K	5%	1/4W
**********					
		SENSOR BOARD			
		**********			
		< IC >			
IC751	8-759-989-76	IC	RPR-359F		
**********					
	A-4750-863-A	S-MASTER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C700	1-104-658-91	ELECT	100uF	20%	10V
C701	1-126-960-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description			Remarks
C702	1-136-850-11	MYLAR	0.1uF	5%	63V
C703	1-104-658-91	ELECT	100uF	20%	10V
C704	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C706	1-164-346-11	CERAMIC CHIP	1uF		16V
C708	1-164-346-11	CERAMIC CHIP	1uF		16V
C709	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C710	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C712	1-164-346-11	CERAMIC CHIP	1uF		16V
C713	1-163-078-11	CERAMIC CHIP	0.033uF	10%	25V
C714	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C715	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C716	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C717	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C718	1-163-078-11	CERAMIC CHIP	0.033uF	10%	25V
C719	1-100-924-21	CAP, ELECT			
C720	1-136-177-00	FILM	1uF	5%	50V
C721	1-125-898-91	CERAMIC CHIP	0.22uF	10%	50V
C722	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C723	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C724	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C725	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C726	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C727	1-125-898-91	CERAMIC CHIP	0.22uF	10%	50V
C728	1-136-177-00	FILM	1uF	5%	50V
C729	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C730	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C731	1-104-658-91	ELECT	100uF	20%	10V
C732	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C733	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C734	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C735	1-126-964-11	ELECT	10uF	20%	50V
C736	1-126-963-11	ELECT	4.7uF	20%	50V
C737	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C738	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C739	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C741	1-126-965-91	ELECT	22uF	20%	50V
C745	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C746	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C747	1-104-658-91	ELECT	100uF	20%	10V
C748	1-126-964-11	ELECT	10uF	20%	50V
C749	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C750	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C751	1-126-960-11	ELECT	1uF	20%	50V
C752	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C753	1-104-658-91	ELECT	100uF	20%	10V
C754	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C756	1-164-346-11	CERAMIC CHIP	1uF		16V
C757	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C758	1-164-346-11	CERAMIC CHIP	1uF		16V
C759	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C762	1-164-346-11	CERAMIC CHIP	1uF		16V
C763	1-163-078-11	CERAMIC CHIP	0.033uF	10%	25V
C764	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C765	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C766	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C767	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C768	1-163-078-11	CERAMIC CHIP	0.033uF	10%	25V
C769	1-100-924-21	CAP, ELECT	2200uF		35V
C770	1-136-177-00	FILM	1uF	5%	50V
C771	1-125-898-91	CERAMIC CHIP	0.22uF	10%	50V
C772	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C773	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C774	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C775	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C776	1-125-898-91	CERAMIC CHIP	0.22uF	10%	50V
C777	1-136-177-00	FILM	1uF	5%	50V
C778	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C779	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C780	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C781	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C782	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C783	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C784	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C785	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C786	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C787	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C788	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C790	1-104-658-91	ELECT	100uF	20%	10V
C791	1-136-850-11	MYLAR	0.1uF	5%	63V
C792	1-126-935-11	ELECT	470uF	20%	16V
C794	1-164-346-11	CERAMIC CHIP	1uF		16V
C795	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C797	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C798	1-104-658-91	ELECT	100uF	20%	10V
C799	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C800	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C801	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C802	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C803	1-126-956-91	ELECT	0.1uF	20%	50V
C804	1-104-658-91	ELECT	100uF	20%	10V
C805	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C806	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C821	1-216-864-11	SHORT CHIP	0		
C822	1-216-864-11	SHORT CHIP	0		
C823	1-216-864-11	SHORT CHIP	0		
C824	1-216-864-11	SHORT CHIP	0		
C825	1-216-864-11	SHORT CHIP	0		
C826	1-216-864-11	SHORT CHIP	0		
C827	1-216-864-11	SHORT CHIP	0		
C828	1-216-864-11	SHORT CHIP	0		
C829	1-216-864-11	SHORT CHIP	0		
C830	1-216-864-11	SHORT CHIP	0		
		< CONNECTOR >			
CN700	1-784-780-11	CONNECTOR, FFC 19P			
* CN701	1-564-511-11	PLUG, CONNECTOR 8P			
CN702	1-564-507-11	PLUG, CONNECTOR 4P			
		< DIODE >			
D701	8-719-988-61	DIODE 1SS355TE-17			
D702	8-719-988-61	DIODE 1SS355TE-17			
D703	8-719-988-61	DIODE 1SS355TE-17			
D704	8-719-988-61	DIODE 1SS355TE-17			
D705	6-500-260-01	DIODE P6SMB39AT3			
D706	6-500-260-01	DIODE P6SMB39AT3			
D707	8-719-988-61	DIODE 1SS355TE-17			

S-MASTER

Ref. No.	Part No.	Description	Remarks
D708	8-719-988-61	DIODE 1SS355TE-17	
D709	8-719-988-61	DIODE 1SS355TE-17	
D710	8-719-988-61	DIODE 1SS355TE-17	
D711	8-719-988-61	DIODE 1SS355TE-17	
D712	8-719-988-61	DIODE 1SS355TE-17	
D755	6-500-260-01	DIODE P6SMB39AT3	
D756	6-500-260-01	DIODE P6SMB39AT3	
		< EARTH TERMINAL >	
EP701	1-537-738-21	TERMINAL, GROUND	
EP702	1-537-738-21	TERMINAL, GROUND	
		< FERRITE BEAD >	
FB702	1-216-864-11	SHORT CHIP 0	
		< FILTER >	
FL702	1-234-177-21	FILTER, CHIP EMI	
FL703	1-234-177-21	FILTER, CHIP EMI	
FL704	1-234-177-21	FILTER, CHIP EMI	
FL706	1-234-177-21	FILTER, CHIP EMI	
		< IC >	
IC701	6-701-834-01	IC PCM1802DBR	
IC703	8-759-387-77	IC TC7WU04F (TE12R)	
IC704	6-700-263-01	IC NJM2870F18 (TE2)	
IC705	6-705-979-01	IC CXD9788AR	
IC706	8-759-583-47	IC uPC2933T-E2	
IC707	6-705-695-01	IC CXD9775M	
IC708	6-705-695-01	IC CXD9775M	
IC709	6-701-189-01	IC MC74VHC1GU04DFT1	
IC710	8-759-473-95	IC uPC2905T-E1	
		< COIL >	
L701	1-412-951-11	INDUCTOR 10uH	
L702	1-412-951-11	INDUCTOR 10uH	
L703	1-412-951-11	INDUCTOR 10uH	
L704	1-216-295-91	SHORT CHIP 0	
L705	1-412-939-11	INDUCTOR 1uH	
L708	1-456-813-11	COIL, AIR-CORE	
L709	1-456-813-11	COIL, AIR-CORE	
L710	1-456-680-11	COIL, CHOKE 10UF	
L711	1-456-680-11	COIL, CHOKE 10UF	
L712	1-412-951-11	INDUCTOR 10uH	
L713	1-216-295-91	SHORT CHIP 0	
L714	1-216-295-91	SHORT CHIP 0	
L715	1-216-295-91	SHORT CHIP 0	
L716	1-216-295-91	SHORT CHIP 0	
L758	1-456-813-11	COIL, AIR-CORE	
L759	1-456-813-11	COIL, AIR-CORE	
L760	1-456-680-11	COIL, CHOKE 10UF	
L761	1-456-680-11	COIL, CHOKE 10UF	
		< TRANSISTOR >	
Q701	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q702	8-729-602-36	TRANSISTOR 2SA1602-F	
Q703	8-729-602-36	TRANSISTOR 2SA1602-F	
Q752	8-729-602-36	TRANSISTOR 2SA1602-F	
Q753	8-729-602-36	TRANSISTOR 2SA1602-F	

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R701	1-216-864-11	SHORT CHIP	0		
R704	1-216-864-11	SHORT CHIP	0		
R706	1-216-809-11	METAL CHIP	100	5%	1/10W
R707	1-216-864-11	SHORT CHIP	0		
R708	1-216-864-11	SHORT CHIP	0		
R709	1-216-864-11	SHORT CHIP	0		
R710	1-216-809-11	METAL CHIP	100	5%	1/10W
R711	1-216-809-11	METAL CHIP	100	5%	1/10W
R712	1-216-809-11	METAL CHIP	100	5%	1/10W
R713	1-216-837-11	METAL CHIP	22K	5%	1/10W
R714	1-216-818-11	METAL CHIP	560	5%	1/10W
R716	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R717	1-216-864-11	SHORT CHIP	0		
R718	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R719	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R720	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R721	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R722	1-216-864-11	SHORT CHIP	0		
R723	1-216-841-11	METAL CHIP	47K	5%	1/10W
R724	1-216-302-00	RES-CHIP	2.7	5%	1/10W
R725	1-216-302-00	RES-CHIP	2.7	5%	1/10W
R726	1-216-845-11	METAL CHIP	100K	5%	1/10W
R727	1-216-845-11	METAL CHIP	100K	5%	1/10W
R728	1-216-845-11	METAL CHIP	100K	5%	1/10W
R729	1-216-821-11	METAL CHIP	1K	5%	1/10W
R730	1-216-809-11	METAL CHIP	100	5%	1/10W
R731	1-216-809-11	METAL CHIP	100	5%	1/10W
R732	1-216-809-11	METAL CHIP	100	5%	1/10W
R735	1-216-864-11	SHORT CHIP	0		
R736	1-216-857-11	METAL CHIP	1M	5%	1/10W
R737	1-216-821-11	METAL CHIP	1K	5%	1/10W
R739	1-216-864-11	SHORT CHIP	0		
R741	1-216-809-11	METAL CHIP	100	5%	1/10W
R742	1-216-833-11	METAL CHIP	10K	5%	1/10W
R743	1-216-809-11	METAL CHIP	100	5%	1/10W
R744	1-216-864-11	SHORT CHIP	0		
R745	1-216-809-11	METAL CHIP	100	5%	1/10W
R746	1-216-809-11	METAL CHIP	100	5%	1/10W
R747	1-216-809-11	METAL CHIP	100	5%	1/10W
R748	1-216-841-11	METAL CHIP	47K	5%	1/10W
R749	1-216-864-11	SHORT CHIP	0		
R750	1-216-845-11	METAL CHIP	100K	5%	1/10W
R751	1-216-864-11	SHORT CHIP	0		
R752	1-216-837-11	METAL CHIP	22K	5%	1/10W
R754	1-216-818-11	METAL CHIP	560	5%	1/10W
R756	1-216-809-11	METAL CHIP	100	5%	1/10W
R757	1-216-864-11	SHORT CHIP	0		
R758	1-216-864-11	SHORT CHIP	0		
R759	1-216-864-11	SHORT CHIP	0		
R760	1-216-809-11	METAL CHIP	100	5%	1/10W
R761	1-216-809-11	METAL CHIP	100	5%	1/10W
R762	1-216-809-11	METAL CHIP	100	5%	1/10W
R764	1-216-864-11	SHORT CHIP	0		
R766	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R767	1-216-864-11	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remarks
R768	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R769	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R770	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R771	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R772	1-216-864-11	SHORT CHIP	0		
R773	1-216-841-11	METAL CHIP	47K	5%	1/10W
R774	1-216-302-00	RES-CHIP	2.7	5%	1/10W
R775	1-216-302-00	RES-CHIP	2.7	5%	1/10W
R776	1-216-845-11	METAL CHIP	100K	5%	1/10W
R777	1-216-845-11	METAL CHIP	100K	5%	1/10W
R778	1-216-845-11	METAL CHIP	100K	5%	1/10W
R779	1-216-864-11	SHORT CHIP	0		
R781	1-216-809-11	METAL CHIP	100	5%	1/10W
R782	1-216-857-11	METAL CHIP	1M	5%	1/10W
R783	1-216-864-11	SHORT CHIP	0		
R784	1-216-809-11	METAL CHIP	100	5%	1/10W
R785	1-216-809-11	METAL CHIP	100	5%	1/10W
R786	1-216-809-11	METAL CHIP	100	5%	1/10W
R787	1-216-809-11	METAL CHIP	100	5%	1/10W
R788	1-216-809-11	METAL CHIP	100	5%	1/10W
R789	1-216-809-11	METAL CHIP	100	5%	1/10W
R790	1-216-809-11	METAL CHIP	100	5%	1/10W
R792	1-216-864-11	SHORT CHIP	0		
R793	1-216-845-11	METAL CHIP	100K	5%	1/10W
R795	1-216-864-11	SHORT CHIP	0		
		< VIBRATOR >			
X701	1-795-843-11	VIBRATOR, CRYSTAL (12.288MHz)			
X702	1-795-660-21	QUARTZ CRYSTAL UNIT (49.152MHz)			
**********					
		SP OUT BOARD			
		**********			
		< CAPACITOR >			
C591	1-131-992-91	CERAMIC CHIP	100000PF		35V (AEP, UK, EA, RU)
C592	1-131-992-91	CERAMIC CHIP	100000PF		35V (AEP, UK, EA, RU)
C594	1-131-992-91	CERAMIC CHIP	100000PF		35V (AEP, UK, EA, RU)
C595	1-131-992-91	CERAMIC CHIP	100000PF		35V (AEP, UK, EA, RU)
C596	1-131-992-91	CERAMIC CHIP	100000PF		35V (AEP, UK, EA, RU)
C597	1-131-992-91	CERAMIC CHIP	100000PF		35V (AEP, UK, EA, RU)
C598	1-131-992-91	CERAMIC CHIP	100000PF		35V (AEP, UK, EA, RU)
C599	1-131-992-91	CERAMIC CHIP	100000PF		35V (AEP, UK, EA, RU)
		< CONNECTOR >			
CN510	1-564-507-11	PLUG, CONNECTOR 4P			
		< EARTH TERMINAL >			
EP505	1-537-738-21	TERMINAL, GROUND			

Ref. No.	Part No.	Description			Remarks
		< COIL >			
L590	1-420-872-52	COIL, AIR-CORE (AEP, UK, EA, RU)			
L591	1-420-872-52	COIL, AIR-CORE (AEP, UK, EA, RU)			
L592	1-420-872-52	COIL, AIR-CORE (AEP, UK, EA, RU)			
L593	1-420-872-52	COIL, AIR-CORE (AEP, UK, EA, RU)			
		< RESISTOR >			
R592	1-249-625-31	CARBON	10	5%	1/2W (AEP, UK, EA, RU)
R593	1-249-625-31	CARBON	10	5%	1/2W (AEP, UK, EA, RU)
R594	1-249-625-31	CARBON	10	5%	1/2W (AEP, UK, EA, RU)
R595	1-249-625-31	CARBON	10	5%	1/2W (AEP, UK, EA, RU)
R596	1-249-625-31	CARBON	10	5%	1/2W (AEP, UK, EA, RU)
R597	1-249-625-31	CARBON	10	5%	1/2W (AEP, UK, EA, RU)
R598	1-249-625-31	CARBON	10	5%	1/2W (AEP, UK, EA, RU)
R599	1-249-625-31	CARBON	10	5%	1/2W (AEP, UK, EA, RU)
		< TERMINAL >			
TM504	1-537-114-21	TERMINAL BOARD (SPEAKER)			
**********					
		SW (1) BOARD			
		**********			
		< SWITCH >			
S721	1-786-084-11	SWITCH, DETECTION (MAIN TRAY IN/OUT)			
**********					
		SW (2) BOARD			
		**********			
		< SWITCH >			
S731	1-786-382-11	SWITCH, PUSH (1 KEY) (SUB TRAY IN)			
**********					
	A-4750-851-A	VOL BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1007	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1008	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1013	1-126-947-11	ELECT	47uF	20%	35V
		< CONNECTOR >			
CN1050	1-784-776-11	CONNECTOR, FFC 15P			
CN1051	1-784-766-11	CONNECTOR, FFC 5P			
		< DIODE >			
D1050	8-719-071-44	DIODE SELS5223C-TP15 (I/⏻)			
D1051	8-719-988-61	DIODE 1SS355TE-17			

VOL

Ref. No.	Part No.	Description			Remarks
		< IC >			
IC1050	6-600-349-31	IC NJL24H400A			
		< TRANSISTOR >			
Q1041	8-729-027-43	TRANSISTOR DTC114EKA-T146			
		< RESISTOR >			
R1048	1-216-864-11	SHORT CHIP	0		
R1049	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1050	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1059	1-216-805-11	METAL CHIP	47	5%	1/10W
R1090	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1091	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1092	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1093	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1094	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1095	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< SWITCH >			
S1042	1-762-875-21	SWITCH, KEYBOARD (I/⏻)			
S1043	1-762-875-21	SWITCH, KEYBOARD (DSGX)			
S1050	1-786-418-11	SWITCH, ROTARY (ENCODER) (BASS)			
S1051	1-786-418-11	SWITCH, ROTARY (ENCODER) (TREBLE)			
S1052	1-418-725-51	ENCODER, ROTARY (12 TYPE) (VOLUME)			
**********					
		MISCELLANEOUS			
		**********			
3	1-769-984-11	WIRE (FLAT TYPE) (13 CORE)			
4	1-765-332-11	WIRE (FLAT TYPE) (15 CORE)			
5	1-769-869-11	WIRE (FLAT TYPE) (5 CORE)			
6	1-769-939-11	WIRE (FLAT TYPE) (11 CORE) (EXCEPT AEP, UK)			
6	1-773-003-11	WIRE (FLAT TYPE) (15 CORE) (AEP, UK)			
11	1-693-603-31	TUNER (FM/AM) (E3, E51, EA)			
11	1-693-604-11	TUNER (FM/AM) (AEP, UK)			
11	1-693-623-31	TUNER (FM/AM) (US)			
11	1-693-654-11	TUNER (FM/AM) (RU)			
59	1-796-880-11	DECK, MECHANISM			
⚠102	1-468-813-11	REGULATOR, SWITCHING (AEP, UK, RU)			
⚠102	1-468-819-11	REGULATOR, SWITCHING (US)			
⚠102	1-468-821-11	REGULATOR, SWITCHING (E3, E51, EA)			
⚠103	1-775-786-21	CORD, POWER (UK, EA)			
⚠103	1-777-071-53	CORD, POWER (AEP, E51, RU)			
⚠103	1-783-820-11	CORD, POWER (US)			
⚠103	1-827-226-11	CORD, POWER (E3)			
162	1-471-035-11	MAGNET ASSY			
256	1-827-992-11	WIRE (FLAT TYPE) (16 CORE)			
⚠259	8-820-244-01	OPTICAL PICK-UP (KSM-215DCP/C2NP)			
M761	A-4713-174-A	MOTOR (81) ASSY (LD/ST MOTOR)			
M762	A-4713-174-A	MOTOR (81) ASSY (BU U/D MOTOR)			
S771	1-478-552-11	ENCODER, ROTARY (MD)			
S781	1-478-551-11	ENCODER, ROTARY (ST U/D)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004.04	New
1.1	2005.05	Part No. change of the Ref. No. 3. (SPM-05029) Illustration correction of the Ref. No. 53. (SPM-05031) Part No. change of the Ref. No. 52. (SPM-05032)
1.2	2007.11	Correction of exploded views (part No. and part name of Ref. No. 211 and 213 replacement). (SPM-07096)

SS-CPX22/NXM3

SERVICE MANUAL

Ver 1.0 2004. 04

Photo : SS-CPX22

US Model
SS-CPX22
AEP Model
SS-CPX22/NXM3
UK Model
E Model
SS-CPX22

- SS-CPX22 is front speaker system in CMT-CPX22.
- SS-NXM3 is front speaker system in MHC-NXM3.

SPECIFICATIONS

Speaker system	2-way, bass-reflex type
Speaker units	
Woofer:	15 cm dia., cone type
Tweeter:	2.5 cm dia., soft-dome-type
Nominal impedance	4 ohms
Dimensions (w/h/d)	Approx. 173 x 275 x 265 mm
Mass	Approx. 3.9 kg net per speaker

Design and specifications are subject to change without notice.

SPEAKER SYSTEM

9-877-829-01
2004D02-1
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Sony Corporation
Home Audio Company
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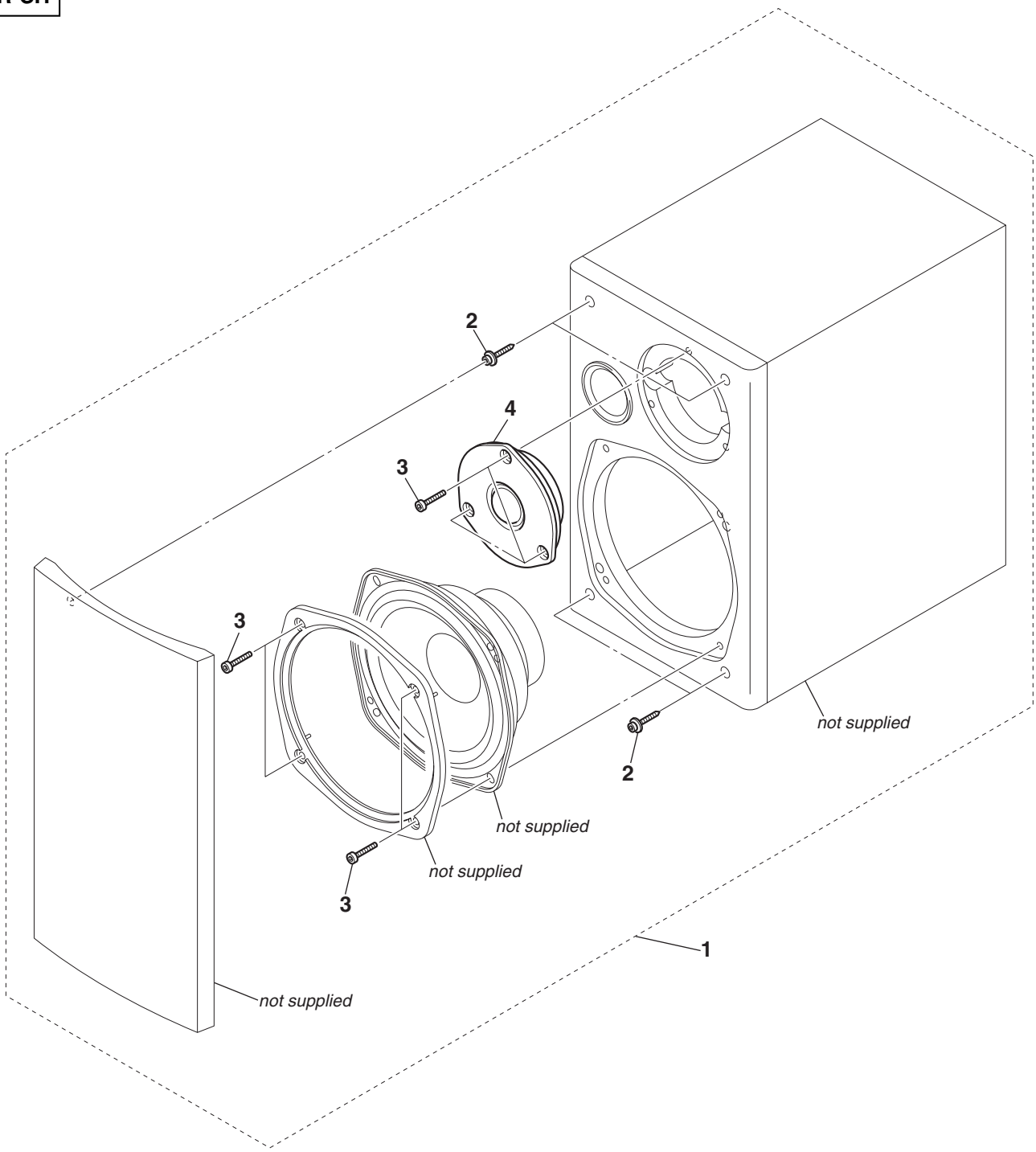
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

R-CH



Ref. No.	Part No.	Description	Remarks
1	A-4713-853-A	SYSTEM (R) ASSY	
1	A-4713-854-A	SYSTEM (L) ASSY	
2	4-249-981-01	PIN, CATCHER	
3	4-235-903-02	SCREW (3.5X20)	
4	X-4956-273-1	TWEETER ASSY	

MEMO

REVISION HISTORY

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1.0	2004.04	New